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PELLAGRA[1]

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It is just about twenty years since pellagra was first recognized as occurring in the United States. During that period it has been the subject of much discussion both in the medical and the lay press. Yet, by reason of certain peculiarities of the disease, it is probable that to some of you pellagra is little, if at all, more than a name. We shall, therefore, begin this discussion with a brief review of some of the more outstanding features of the disease.

A mental picture sufficiently satisfactory for the present purpose may perhaps be most easily formed by considering a representative sample, as it were, of a fairly well developed though not advanced attack. The patient suffering such an attack, most commonly a woman, will be found to have a "breaking out" and will complain of a poor or variable appetite, of a medley of symptoms commonly designated as "indigestion," of being more or less "run down," and of being "nervous" and, perhaps, depressed. This does not, of course, exhaust her complaints but, together with the eruption, which itself is quite distinctive, they form a rather characteristic combination.

It need hardly be stated that there are many cases that are more marked, much more severe, and others, even more numerous, that are very mild. Disturbances of the digestive tract, particularly a somewhat peculiar inflammation of the mouth, or stomatitis, are likely to be conspicuous and important in the former but slight and insignificant in the latter class of cases.

[1] Published with the permission of the Surgeon General of the United States Public Health Service. Presented before the American Dietetic Association, October 31, 1928.

Such, in brief, are some of the more distinctive signs and symptoms presented by the individual attacked by pellagra. But our conception of the disease would be one-sided, incomplete, if we stopped with this. It must not be forgotten that the individual attacked, is, or may be conceived of as, a member of a household, and the household is, of course, one of a varying number that constitute the community. Now, obviously, a community may have a varying number of its members attacked by the disease or, in other words, a community may be lightly or severely attacked. We have, therefore, not only the sick individual but, in a very real sense, also the sick community to consider if we would have a balanced picture of the disease. What are some of the signs and symptoms of pellagra exhibited by a community sick with pellagra or, in more technical terms, what are some of the features characterizing endemic pellagra?

If we were to take a map of the United States and for each death caused by the disease during a selected period were to stick a pin in the locality where the case developed, we would find on completing this task that there were relatively very few pins, that is deaths or cases of pellagra, in the area constituted by the northern and western states, but that nearly all were in the area south of the Potomac and Ohio rivers. Thus we would have revealed to us the first outstanding sign presented, by the affected community we are considering, the United States, namely, a singular inequality in the distribution of the disease, a striking relative restriction to a limited portion, the southern states.

If now we examine our hypothetical spot map further we will quickly be struck by another interesting thing. It will be found that even in the area to which the disease is relatively almost entirely confined it does not affect all parts to the same degree. Thus, while Virginia and Florida have, in general, been lightly affected, the Carolinas have been sorely stricken. Perhaps even more remarkable and interesting is the inequality of incidence often to be found in different parts of the same state. In Mississippi, for example, pellagra is of twice as frequent occurrence in the northwestern quarter, or "delta," as in the rest of the state.

If those of you who might be particularly interested and might wish to see and study pellagra, were to leave for Mississippi (or any other locality where the disease is prevalent) during the late fall, you would on reaching your destination quickly discover still another remarkable thing about the disease. In response to your request to be shown cases of the disease, you would be informed by the physicians that while they

had seen a good many cases during the summer there were few or none to be seen at this time. On inquiry as to why this was the case you would be told that it was believed to be due to the fact that the attack of pellagra naturally tends to improve with the approach of the cool weather of the fall. In other words, you would learn that the disease is strikingly seasonal in its incidence and prevalence. It may be remarked that in studies of this interesting and important phenomenon it has been found by the United States Public Health Service that of the attacks recorded in any one year, some 80 to 90 per cent make their appearance within a period of about four months—April 1 to August 1—and, furthermore, that the evidence of the attack normally fades as the end of this pellagra season is approached and, ordinarily, nearly all signs of the attack have gone within a few weeks after the close of that period. It follows, therefore, that even in a locality where numerous cases may have been encountered in May and June, not a single definite case might be found in October or November.

In the course of the suggested field trip you are likely to learn, too, that although few of the many cases that were prevalent during the summer show any notable evidence of their illness at the time of your visit, many of them will break out again or recur next spring or summer. This disposition or tendency of the disease to recur was well known to the earliest observers and gave rise to the belief that the disease was incurable, a belief that was expressed in the now classical phrase "Once a pellagrin always a pellagrin." From this one can readily understand why pellagra came to be so much dreaded by laity and physician alike—a dread that has not yet altogether disappeared in spite of our better knowledge of the disease.

In this connection, it may be recalled that it is commonly stated that the adult woman, the housewife, is of all the members of the household the one most frequently attacked. Recent investigations have revealed, however, that this is not a fact. It has been found, instead, that the disease is most frequent in children between two and fifteen years of age. In other words, the fact has emerged that pellagra is mainly a disease of children. The older idea seems to have arisen from the fact that the disease being severe in the adult female, mild in children, and of infrequent occurrence in the adult male, and the physician's experience being principally with the disease in the severely ill individual—the adult female—his judgment and, thus, conventional opinion were formed accordingly.

Although generally mild in children, pellagra nevertheless exerts a

debilitating effect on them which, even though not easy to define in the individual case, can not but be deplorable both in its immediate and remote effects. This, together with the invalidism and considerable fatality which it causes—particularly in the adult female, the housewife—gives a somber emphasis to the social importance of the disease.

The endemic disease possesses a number of other characteristics of great interest. The most important of these is the extraordinary effect on its incidence of shifting economic conditions. Hard times, especially when expressed in a reduction of family income with stationary or rising food prices, are very likely to be followed by an increase in the incidence of the disease, while increase in family income, more particularly increase in its purchasing power, is very likely to be followed by a decline in incidence. Witness, for example, the great increase that took place in 1915 following the hard times brought on by the outbreak of the war in Europe in the summer of 1914, and the great decrease in 1916 following the improved conditions that developed during 1915. It is of utmost importance clearly to grasp the fact of its intimate relation to economic conditions for it is as a consequence of this basic relationship that many of the important characters of the disease arise and only through this relationship can they be understood.

Having reviewed some of the more striking features of the disease both as a clinical entity and as an endemic, we may now ask, what is the cause of this malady? The answer constitutes a long and in many respects a most fascinating story. It begins nearly two hundred years ago with the suggestion advanced by the very first student of the disease, the Spanish physician Casal, that there was some connection between the disease and a poor diet. In spite of many other suggestions that since then have from time to time been made, Casal's idea, in one form or another, has been a persistently recurring one throughout this long period. The insuperable difficulty to its acceptance, however, has always been the lack of a satisfactory explanation of that connection. The investigations of the past ten or twelve years, mainly those of the United States Public Health Service, have at last given us the key to this nearly two century old puzzle and it may now be stated as established beyond reasonable doubt that pellagra is a vitamin deficiency disease analogous to scurvy and beriberi.

This conclusion was reached as the result of, among other things, a series of pellagra preventive feeding studies with diets containing a presumably adequate supply of, or enriched with, known sources of all the then recognized essentials of an adequate diet. Those feeding tests

all failed to prevent the disease. It was, therefore, inferred that none of the then recognized dietary essentials were necessarily concerned, but that a new or heretofore unrecognized or unappreciated factor must play the primary essential preventive rôle. This factor was designated the pellagra preventive or, for brevity, factor or vitamin P-P. In this connection it may perhaps be remarked that more recently Sherman has suggested that to conform to the practice of naming the vitamins heretofore in vogue, it should be called vitamin G.

The conclusion that pellagra is a vitamin deficiency disease has received support from the results of further studies of pellagra prevention and also from those of feeding studies in the dog and in the rat.

In the dog a condition similar to pellagra in a number of important respects, and very probably essentially identical with that human disease, can now be experimentally induced by feeding. This experimental canine disease, which has been identified with the spontaneous disease known as blacktongue, appears to be due to a deficiency in diet of a new factor which is indistinguishable from the pellagra preventive or factor P-P. With a diet identical in composition with that with which the canine disease blacktongue may be induced, a condition remarkably like pellagra in man may be induced also in the white rat.

The studies in the dog and the rat to which reference has just been made show also, and this has now been confirmed by several investigators both in this country and abroad, that what has long been known as vitamin B really consists of at least two distinct factors: One a heat-sensitive antineuritic or beriberi (polyneuritis) preventive, and the other a heat-resistant factor indistinguishable from the pellagra preventive. Both of these are necessary for growth in the young rat; in the absence of either the young animal does not grow and in addition, depending upon which of the two is lacking, the animal (rat or dog) develops polyneuritis or a pellagra-like condition. On supplying enough of the missing factor the rat resumes growth and, again depending upon which factor is concerned, either the polyneuritis or the pellagra-like condition is prevented or, if treatment has not been too long delayed, cured.

In this connection it may not be amiss to point out that even though it is now clearly demonstrated that the so-called vitamin B is not a single factor but a complex of at least two, it is conceivable that these may themselves prove to be complexes rather than the unit factors that they seem to be. Indeed, some evidence of this has quite recently been advanced.

Notwithstanding this reservation, the available evidence justifies the,

at least tentative, inference that all foods known to contain the so-called vitamin B contain the pellagra preventive and this all the more since, so far as preventive feeding tests in the canine and in the human disease have gone, this deduction has been found to be sound. Since our knowledge of the distribution of the so-called vitamin B is quite extensive this enables us to form some idea of the distribution of the pellagra preventive among our foodstuffs. It is important to bear in mind, however, that this does not necessarily tell us how rich in the pellagra preventive the foods are; for although foods rich in the so-called vitamin B (as determined by the rat growth test) may be assumed to be rich in the pellagra-preventive, the converse does not hold. Indeed, a food seeemingly poor in "vitamin B" (by the rat test) may be a good source of factor P-P. This is well exemplified in the case of lean muscle meat. As is well known, muscle meat (beef) has been rated as very poor in "vitamin B," but tests in both the human and the canine disease show it to be a very good source of P-P.

From our discussion it manifestly follows that the development by an individual of an attack of pellagra may be take as conclusive evidence that for some reason that individual has not included in the diet enough of the foods containing factor or vitamin P-P. Now why should anyone fail to include in the diet enough of such foods? The answer is not simple for there are or may be many reasons involved in which are a variety of collateral or secondary causes of the disease. Let us consider some of the reasons:

The first that may be suggested is individual eccentricity of taste exemplified by some finicky eaters and food faddists (whether legally sane or insane) particularly under circumstances affording but a limited variety of P-P rich foods from which to choose. This accounts for many of the isolated or so-called sporadic cases including those in well-to-do individuals who had or were presumed to have had an excellent diet available. In this connection it may be remarked that this latter class of cases has been the cause of much perplexity and confusion which have arisen in the main from failure of the observer to distinguish between the character and quality of the diet which might perhaps have been eaten and that which actually was eaten. It can not be too strongly emphasized that having a good diet on the family table or bedside tray and eating it may be two very different things.

Next, and more important because large numbers of people may be affected, come certain factors which may operate to cause a shortage in the available supply of certain P-P rich foods. Among these factors

may be mentioned inaccessibility to market; difficulties of transportation, particularly of the more perishable foods; loss through disease of some of the domestic animals depended on as sources of food supply, as for example milch cows, poultry, swine; so-called fencing laws which may make it impracticable for certain portions of the population to keep milch cows, possibly the sole available source of milk for the family; destructive storms or floods causing, directly or indirectly, a reduction in the number of domestic animals (milch cows, goats, poultry, swine) and thus of the supply of animal foods, and of a loss of vegetable gardens leading to a shortage of fresh vegetables.

Finally, there may be suggested such economic factors as insufficient cash or credit to permit of the purchase of enough of the pellagra preventive foods. Such poverty may result from a great variety of causes as, for instance, unemployment in the case of certain industrial population groups and insufficient income from crops (in effect, crop failures) in the case of certain portions of our agricultural population.

From what has been said of the cause or causes of pellagra the indications for the prevention and treatment of the disease become clearly apparent. They are, in principle, very simple: For prevention, include in the diet enough of the pellagra preventive foods—in other words, provide yourself with an "adequate" diet; for treatment, let the patient take liberal amounts of the foods rich in the pellagra preventive.

Now it so happens that, conservatively estimated, there were some 120,000 people in the United States last year (that is during 1927) who suffered an attack of pellagra. One may ask, therefore, why, if the matter is so simple, do so many people continue to be stricken with the disease? The answer lies in the fact, which clearly appears even in our brief discussion of some of the secondary or collateral causes, that the problem of pellagra is in the main a problem of poverty. Moreover, this problem involves and is complicated by dietary habits which are themselves in a measure, at least, related to climatic conditions and thus to the seasonal availability of certain foods. It is because of this complex of factors that pellagra continues and will continue to take its toll in the form of sickness and death.

Education of the people will help; but improvement in basic economic conditions alone can be expected to heal this festering ulcer in the body of our people. This, obviously, can not be accomplished in a day, but that day will be hastened by the coöperative action of all whose vision enables them to see the great social and economic advantages to be derived from the eradication of the disease.

THE RELATIONSHIP OF MENTAL DISEASE TO DIGESTION AND NUTRITION[1]

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One hundred and nineteen years ago Pinel, the "Father of Psychiatry" said, "It seems that the primitive seat of insanity generally is in the region of the stomach and intestines, and it is from that center that the disorder of intelligence propagates itself as by a species of irradiation."

Pinel is to be congratulated upon the accuracy of his observations, but unfortunately in his conclusions he confused cause and effect. The statement is repeated here, however, for the purpose of illustrating the antiquity of the notion that there is a close relationship between mental disease and the function of digestion and the maintenance of nutrition.

Ruminations upon this subject lead us into the fascinating realm of neural control and psychic function. The approaches to the subject are numerous and interesting. We might take any one of several roads to the citadel and finally arrive at the center of interest. For instance, we might take the route of pathology, or physiology, or anthropometry or psychopathology; or we might consider it from a psychological viewpoint, following Freud, Jung, Adler or Kempf, but for the moment I have chosen to approach the subject from the point of view of integration. This must lead us to a consideration of the nervous system, in part, and as a whole.

Before proceeding further, however, we should pause and remind ourselves of the fact that it is no longer scientifically orthodox to think in terms of body *or* mind, and to reiterate that body *and* mind are simply two factors of an integrated whole, the separation of which leads promptly and irrevocably to disintegration and finally to death. This integrated, coördinated whole, then, is that complex organization known by various names, but most frequently by the terms "You" or "I." Now as this mechanism moves through the experience sometimes termed "consciousness," the gradient of relationship between the purely somatic and essentially psychic elements changes rapidly and abruptly, depending

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upon circumstance and experience, habit and training, heredity and environment. The integrating factor in this organization is the nervous system, which serves primarily to coördinate, time, and tie together all the various somatic and psychic activities of the body, in order that it may function efficiently as a living unit.

The nervous system then, is roughly divided into the vegetative system, the cerebral cortex and numerous associative and connecting links. The former is the oldest part of the scheme, so to speak, and represents the lowest biological level in the phylogenetic development of the nervous mechanism. Its function is to take care of certain activities of the body that are more or less automatic in nature. Among these activities is the function of digestion, and upon the normality of this function depends the state of nutrition, other factors being equal. We must not forget, however, that various elements in this digestive system have a self-contained autonomy, independent of the vegetative nervous system. Cannon, Alvarez and Pavloff have shown that small segments of the intestines will continue to exhibit peristaltic movements for days, after all connection with the nervous system has been severed; in fact, they continue to show muscular contractions when removed entirely from the body, provided they are kept well supplied with certain simple chemicals. We must also remember that these automatic functions of the vegetative nervous system may be seriously altered by influences entirely outside the somatic sphere; namely, by psychogenic energies.

The cerebral cortex represents the younger or more recent product of development in the nervous system, and has as its function, a more or less supervisory control over the individual in his entirety. Its activities are on a higher plane of biological expression, and, while it directs, and coördinates the organism as a whole, through its physiological rôle, it goes still further, and through its psychological rôle acts as the mechanism by which the individual is brought into relationship with his environment, and through which it is made possible for him to mould and utilize the environment for his needs. Taken in its entirety, we speak of the nervous system as an adaptive mechanism. It is the interference with this function of adaptation, that interests us for the moment. In the light of modern psychiatry, mental illness represents a failure in adaptation, because of the unintegrated state of the various factors of personality.

The purely somatic dysfunctions, such as diabetes and nephritis, while extremely interesting, do not concern us primarily for the time being. It is the psychic maladaptations that interest us at this time. We must not forget, however, that even the purely somatic, organic diseases have

their mental component, and may produce very serious mental symptoms. As J. Ramsay Hunt has so well said, " . . . . it is the mind which bears the burden of every illness, and directs the adjustment of the individual to pain, deformity and invalidism. . . . . "

The manner in which the mind handles these problems determines, to a greater or less degree, the success or failure of the individual in his relationship with life, and, in addition, determines to a large extent, whether or not he or she is to be happy and well, or unhappy and ill.

As we go through life we develop a certain continuity in habits of thought, points of view and emotional responses, which gradually crystallize into more or less permanent action patterns. Certain of these patterns are inacceptable to our ethical sense or to society, and therefore we make an attempt to thrust them out of mind. We try to forget them, but in the very attempt to forget, we only succeed in driving them deeper, and fixing them more firmly into the mind. Of course, we do succeed in getting them temporarily out of our awareness, but we have freed ourselves of them only by repressing them into the non-conscious part of the mind. Here they may lie dormant for years, and then, when the powers of repression waken, they may return to full consciousness in a distorted or disguised form, or they may begin to live a more or less independent existence as dissociated ideas, or they may become converted into various somatic sensations or perverted visceral functions. It is this material, these groups of ideas and emotions buried in the non-conscious part of the mind, that determine much of our behavior and comfort, and most of our gastric dysfunction.

What has all this to do with the relationship of mental disease to digestion and nutrition? It is simply that it is this non-conscious, inacceptable, frequently unethical, repressed material that acts as the psychogenic determinator of our reactions. When this repressed material is expressed in symbolic, rather than in real form, then we have a serious form of disintegration; when this happens to influence the reaction of the digestive apparatus, as it frequently does, then we have the true cause of much of its dysfunction.

The evidences of mental disease are simply the disorders of the various functions of the mental machinery. For instance, the older descriptive psychologists tell us that a mental set, so to speak, is made up of the sensorium, the intellect and the motorium. The function of the sensorium is perception, the process by which mental pictures are made; that of the intellect, thinking; and of the motorium, volition. Running through all this is a feeling tone, which accompanies all mental function-

ing; in other words, we have affect or emotion accompanying all mental life. These various functions and attributes or characteristics of mind when closely knit, serve to keep the personality well integrated. In conditions of disintegration, temporary or permanent, they become disordered, and the relationship of mental disease to digestion and nutrition depends upon the various influences of these disorders upon somatic function.

In disorders of perception we find illusions and hallucinations intruding themselves upon the mind of the patient. The patient, because of a disordered perception, has false pictures made upon the recording cerebral cortex. As a result of this he may misidentify the various articles of diet upon his tray, and consequently refuse to eat. In great distress he points out to us the disgusting and nauseating articles which he sees in his dishes, when in reality his trays are attractice in appearance, and appetizing in odor and taste. We have a patient in the hospital, who refuses to eat a mouthful of food because of the fact that the various articles of diet are covered with hideous animals and vermin which she sees clearly crawling about in her dishes. Still another case comes to mind in which a young man was quite unable to consume his meals because of the fact that he spent his entire meal time watching the antics of miniature men and women playing about and in the dishes upon his tray. We have also hallucinations of taste, and smell, which serve to interfere with the consumption of food.

In hallucinations of organic sensations, a condition in which the normal sensory impulses going from the viscera to the cerebral cortex are misinterpreted, exaggerated or misidentified, we see the development of the most bizarre notions relative to anatomical structure and physiological function. Frequently in the depressions of the involutional period we hear patients complain that the organs of digestion have been removed entirely from the abdomen, or replaced with organs of other persons.

In certain other conditions of disordered perception, there is a state of mind known as clouding of consciousness, in which the person is out of touch with what is going on in the environment, and in which the passage of time is not apprehended. This results in the patient going for long periods of time without food or drink, as a result of which the body becomes much undernourished and dehydrated. Finally, there is a greatly reduced amount of salivary secretion, with a concurrent growth of putrefactive bacteria in the mouth, and the development of foul infections in the salivary glands and about the teeth. Frequently patients who have been cared for at home for long periods of time before hospitali-

zation, have been received in the hospital in this condition. Thus, patients with mental diseases characterized by hallucinations and illusions, frequently show a decided reduction in the intake of food with the resulting interference with nutrition.

It is in disorders of the content of thought, however, that we find a most persistent and bizarre interference with digestion. In this condition delusions are developed, because of which the patient refuses to allow food or drink to pass his lips; nourishment may be taken only after elaborate preparation and precaution. Frequently in the paranoid conditions we find patients refusing to partake of food because of the delusion that they are being poisoned. We have today in our institution a woman of great intelligence and cultivation, who will not eat or drink a mouthful because she believes we are in league with the members of a certain religious sect who are trying to get her out of the way by slowly poisoning her. This belief, though false, is supported by reason, by argument and by appeals to actual experience, and therefore cannot be shaken. As a result she has been greatly reduced in weight, and her general nutrition is at an extremely low ebb. We feed her artificially, and then she regurgitates all we have given her. In spite of the fact that her mouth is covered for several minutes following the feeding, she will still throw up her food and discharge it through her nose. This case is given as an illustration of the great difficulty we have in maintaining a satisfactory degree of nutrition in certain mental cases. In still another case with delusions the patient suddenly began to refuse all food. When an explanation was requested she replied, "It is not necessary for me to eat; God will provide."

In all these cases where the patient refuses to eat we are obliged to utilize the artificial feeding. I wish to touch upon one phase only, the psychic effect of tube feedings. Can you imagine the feelings of the patient who believes that every drop of food and water given him contains a deadly poison or a disgusting substance? Yet three times each day four or five people enter his room, forcefully hold him in bed, while another person inserts a nasal tube into his stomach and then pours in a quart of fluid. These delusions are very real to the patient; the psychic effect must be tremendous. It is a vicious circle, and in spite of all the care given to the subject, few patients thrive upon it, even though the calorific value of everything going into the feedings is measured carefully according to the individual needs.

In those diseases wherein there are disorders in the train of thought, we frequently find striking interference in the digestive function, because of

the changes in the rate at which thought is elaborated and discharged. Now in cases where the thought processes occur at great speed, we find a general speeding up of all factors of the digestive function. The motility of the stomach, at times, takes part in the general psychomotor excitement, and food is thrown into the intestinal canal before the stomach has had sufficient time for its digestive process. Here we also find the tonus of the musculature increased, and cardiospasm and pylorospasm are not uncommon. In the same general class of cases we find the intestinal tract sharing in the state of hypermotility and as a result we frequently see the passage of food through the intestines hastened unduly. The secretion of gastric juice is also increased in rate resulting in a characteristic hyperacidity.

Conditions in which retardation of both psychic and somatic functions are in evidence result in delayed digestion, with hypochlorhydria or achlorhydria, and an almost immovable stasis of the stomach muscles. Constipations follow which are at once the despair of the physician and the bête noir of the nurse.

In disorders of volition we likewise find all manner of changes in the voluntary control of the bowels, based upon the negativism of the patient. Frequently suggestibility influences the patient, and actual conditions of vomiting, diarrhoea or constipation may result. In disorders in the field of the emotions, we have the *most* potent cause of disordered digestive process, and it is upon this aspect of psychic interference with digestion that the most work has been done.

The numerous effects of strong emotion upon our bodies is well known. We blush, or break out into a cold clammy perspiration; we become weak in the knees; our hearts bound, and the circulation races along at a tremendous rate. In the dog, the hair actually rises, the pupils dilate and the mouth becomes dry in emotional situations. In addition to these objective evidences of disturbed somatic function, there are many far more important changes going on in the internal organs. Among the viscera most seriously affected are the stomach and intestines.

Pawlow, experimenting upon fistulous dogs, discovered that the mere odor or sight of food caused pleasurable emotions, following by an increased flow of the gastric juices. We are all familiar with the phenomenon of the mouth watering even at the thought of food. Physiologists, therefore, conclude that the proper beginning of digestion is the psychic response to a pleasurable emotion. This belief is well borne out in mental work, and cases of emotional elation are usually hearty eaters—other things being equal. On the other hand, in the mental diseases in which

emotions of fear, anger, worry, and anxiety are prominent symptoms, the flow of gastric juices is not only inhibited, but the inhibition continues for varying periods of time after the source of the emotion has been removed. Recent observers have reported that not only do the gastric juices undergo these changes in the emotional states, but that the pancreatic juice and the flow of bile likewise become definitely checked.

In addition to the interference with secretion in the digestive glands because of the emotional states, we also know that the motility of these organs becomes affected. In other words, the muscular tonus of the stomach and intestines depends to a large extent upon the psychic control, and the state of normality in which it is kept.

In cases of mental disease wherein there is a strong or persistent excitement, frequently all movement of the stomach and intestines cease for long periods of time. Also in states of acute or chronic anxiety, we get complete abolition of peristalsis in the bowel, with the development of obstinate constipation. We frequently admit patients to the hospital in states of tremendous emotional excitement with a history of the intestines not having been evacuated for days prior to admission. It is a curious and interesting fact, that with the application of the proper psychotherapy, and a consequent lessening in the emotional illness, the constipation corrects itself during the course of treatment. We find in the affective (emotional) states, that there are all manner of digestive disturbances. One patient, a man, went into an ungovernable fit of temper which lasted for several hours, and for three days following he was unable to eat at all, because of the upset condition of his digestive apparatus. Conditions of mental unrest frequently give rise to a sense of gastric discomfort. Normally there are but two sensations in the stomach, that of hunger and that of satiety. When we get such symptoms as heaviness, extreme fullness, burning, sinking feelings, fluttering and nausea, we generally believe with McGregor that "The mental artillery should be trained outwardly instead of inwardly on the digestive apparatus." It is curious how frequently we find these various gastric symptoms automatically disappearing following an analytical talk with one of the physicians. Most frequently we discover that the symptoms have been preceded by some mental upset. We have a patient in the hospital at present who had, about once in two months, a tremendous diarrhoea of several days standing. After two or three such attacks we discovered that they invariably appeared upon the receipt of a letter from her sister or her son. When this fact was confirmed, it gave us the clue to the entire situation, before which we had been unable to unravel or

discover the real cause of the woman's illness. With this lead we were able to analyze the situation, reëducate the patient into insight and therefore not only cure the mental condition, but remove entirely the repeated diarrhoeas. Stekel in his book "Conditions of Nervous Anxiety" reports innumerable cases of the psychoneuroses in which a correction of the emotional situation which caused the mental illness also corrected the concomitant gastric conditions. Cannon, in his book "Bodily Changes in Pain, Hunger, Fear and Rage" also reports several such cases. We now know that these abnormal sensations of the stomach and intestines are not always caused by organic diseases of the gastro-intestinal tract, but by mental states brought on by, or the result of, strong affective or emotional situations, such as—unhappiness in domestic circles—failure in business—unfulfilled ambitions and instinctive longings and desires. Our proof of this statement is in the many negative analyses of stomach and intestinal contents in such cases, and complete removal of the digestive disturbance without recourse to any treatment except psychotherapy.

One could continue almost indefinitely, showing the effect of mental states upon the function of digestion and the maintenance of nutrition as the result of an interference with the factors of personality integration. There are many other causes and conditions, but space precludes more than suggesting a few of them. There are the air swallowers, deliberately taking in huge quantities of air, and developing all kinds of gastric difficulties through the psychic factors of hallucinations and delusions. We also have the large group of mentally ill patients who take foreign substances into their digestive systems.

The question of the vitamins and their influence upon mental life and nutrition and the possibility of the relationship of mental disease to vitamin deficiency is of interest. The subject is just being developed; Thomas, of England, has discovered that irridated cod liver oil, containing vitamin D, caused a complete reversal of the abnormal blood reaction known as the haemoclastic crisis in cases of dementia praecox. He further states that his studies suggest the possibility of some relationship between body economy and mental disorder, either directly, or through some as yet unknown function of the liver.

The work of Kretschmer, Lewis, Wertheimer, et al., on the relationship of anthropological measurements to mental reaction types, is opening up an interesting and instructive field, and suggests that there may be factors of etiology in the anatomical form and type of the viscera.

Weston, of South Carolina, is working upon the question of the effect of

food elements upon the special senses. He believes from his observations thus far that protein and mineral deficiency have a decided effect upon the development and growth of the special senses through the action of the digestive functions.

And finally, we are just at the threshold of our knowledge of the endocrine glands and their effects through nutrition on mental life, emotion, growth, etc.

OPPORTUNITIES FOR RESEARCH IN HOSPITAL DIETARY DEPARTMENTS FROM THE ADMINISTRATIVE, EDUCATIONAL AND THERAPEUTIC STANDPOINT[1]

MALCOLM T. MacEACHERN, M.D., C.M., D.Sc.

Associate Director, American College of Surgeons, and Director of Hospital Activities

The science of hospital administration, though young in years, is rapidly developing. It is becoming more and more intricate and exacting, requiring highly trained personnel to carry on its various phases. Your association must contribute to this science particularly through the group engaged in hospital work. Here is a vast opportunity to add to the science of hospital administration as your field of activity is comparatively new and closely related to the actual care of the patient. Your profession has already accomplished excellent work in developing and promoting a proper dietary service in hospitals, by which the patient has greatly benefited. Your work has been a most valuable contribution to hospital service and a potent factor in the better results obtained in the institutional care of the sick in recent years. However, while much has been accomplished, there are many new problems constantly arising, requiring investigation and mature deliberation.

It is quite evident that there are many activities or procedures of your special work which require further investigation and study to determine more definitely their real value and adaptability to the varying conditions found in hospitals today. You will all admit that some of the existing policies and procedures provoke controversial opinions both in the minds of dietitians and hospital administrators.

It is perhaps needless to call your attention to the rapid development of hospitals in the past fifteen or twenty years. During this period many of our modern hospitals have passed through a process of evolution from mere boarding houses for the sick to highly developed scientific institutions where every possible facility is available under proper direction to assure the best care of the sick and injured. Facts bearing out the

[1] Presented before the American Dietetic Association, Washington, D. C., October 30, 1928.

above statement are quite evident from the results of the Hospital Standardization movement of the American College of Surgeons. In 1918, when this movement commenced, only 89 or approximately 3 per cent of all hospitals of twenty-five beds and over met the minimum requirements—the very least any institution caring for the sick should do in order to care properly for the patient. At the present time, 1,919 or 69.5 per cent of the same group of hospitals have attained this goal, and many have gone far beyond the requirements. Most of this development has been within the past ten years. During this period the properly organized dietary department has taken its place as an important contributing factor in service to the patient. Let me remind you in passing that this evolution in hospitals is still going on and the future holds even greater developments.

Members of this Association appreciate the magnitude of the hospital field. This work has increased enormously in recent years through education of the public as to the advantages of modern hospital service. One out of every ten persons, or twelve million patients a year, pass through the hospitals of the United States and Canada. This does not include ambulatory patients treated in out-patient departments of hospitals. There are, approximately, 7,500 hospitals in the United States and Canada and it is definitely known that about 3,000 of these have twenty-five beds or more. There are, let us say, 2,500 hospitals of fifty beds and over, and it is conservatively stated that this group, at least, requires dietitians. It costs more than $3,000,000 a day, or over $1,000,000,000 a year to maintain these hospitals. Of this amount the dietary department spends from twenty-five to thirty per cent, or the staggering sum of $250,000,000 to $300,000,000 a year. The average per diem cost for each patient is believed to be $4.50 to $5, and of this amount the dietary service requires from twenty-five to thirty per cent. A further indication of the magnitude of this industry is the fact that over $300,000,000 worth of new hospital construction is projected annually.

These facts are submitted to remind you of your responsibility in carrying on your part in this extensive work. It is also quite evident that your opportunity for investigation of the many intricate problems incident to your work is unlimited. It is your privilege and obligation to discover better methods and to promote greater efficiency and economy in the administration of the dietary department. It is evident, too, that the extensive growth of the hospital field and rapid evolution of dietetics as applied to the modern hospital has brought forward many problems

for solution; these problems cannot be solved by individual experience, as is frequently attempted. Group study and investigation are necessary in order to provide a comprehensive cross section. Too many conclusions based only on superficial findings are reached. Too frequently is the individual opinion accepted in matters of serious consequence.

At this juncture it would be in keeping with the purpose of this discussion to review briefly the major functions of the modern hospital so that one may determine just how the dietitian fits in with the purposes of a hospital. It is universally recognized that every modern hospital is expected to carry on four major functions, as follows:

1. The primary function of every hospital must be "the right care of the sick and injured." This presupposes the proper environment in the institution wherein the doctor and his coworkers or aides can render the most efficient service to the patient; this means an early, accurate diagnosis and the application of the most scientific treatment to bring the patient back to health, if at all possible, in the briefest and most comfortable manner. This responsibility calls for the combined and coördinated efforts of numerous units in the organization, all contributing to the care of the patient. These activities are all interdependent to such a degree that the absence or weakness of any one may seriously disturb the efficiency of the service to the patient. The administration of the dietary department plays a most important rôle in the right care of the patient and involves the application of numerous well thought out principles and procedures.
2. A secondary function of the hospital today is the teaching of doctors, internes, nurses, dietitians, social workers, technicians and others; in this the dietitian must accept her rôle, particularly in relation to the teaching of student nurses and student dietitians. Nor should one overlook the need for teaching internes and doctors in regard to dietetics as applied to disease, possibly this is now being done in many places. From the educational standpoint, then, the dietitian has an important obligation to fulfill.
3. Another important secondary function of the modern hospital is the promotion or preservation of health. For years the hospital has been looked upon solely as an institution for the treatment of disease, but in recent years its preventive capacity has received almost as much recognition as its curative function. The hospital has permanently entered the realm of preventive medi-

cine, in which the correct interpretation and application of the principles of normal nutrition must contribute an important part. The dietitian can assist in preventive medicine through education of the patient, his family and his friends, and sometimes the public en masse.

I was interested in learning that in the Highland Hospital, Rochester, New York, a class and demonstration room is provided for the education of patients, friends and others, with classes carried on daily. The Health Education Forum, as conducted in the Tacoma General Hospital, Tacoma, Washington, and elsewhere, offers an excellent method of promoting dietary instruction.

4. Another secondary function of the progressive modern hospital, and one of growing importance, is that of research or investigation. Newer and better methods of diagnosis, treatment and administration are constantly required. In this the modern hospital offers a vast field, and in no phase is this more apparent than in dietetics, particularly from the standpoint of diet therapy.

   In 1926 Rena Eckman, then Director of Dietetics, Michael Reese Hospital, Chicago, writing in the *Modern Hospital*, said: "Such has been the progress of investigations along the line of biological science and the chemistry of food and nutrition in normal and abnormal conditions that constant attention must be paid to the world of science in order to take advantage of the newer knowledge of nutrition that is being brought to us. Theories are constantly being substantiated by facts that are brought to light, and today we are continually on tip-toe looking for the next news that may come from Toronto, New Haven, Boston, New York, Chicago, Baltimore, or the West even to the Golden Gate and its further shores." This very appropriately pictures the opportunity for investigation or research.

The field of hospital dietetics in its rapid growth and increasing complexity continues to present important problems for solution and the dietitian must be prepared to play her part efficiently in the administrative, scientific and educational phases. Many problems in each of these phases have been solved but may require further study and adjustment. The hospital administrator today wants facts which will assist him in more economical and efficient hospital administration. The various groups contributing to the service of the institution must supply these

facts in the form of practical and acceptable standards which can be applied with reasonable modification to the varying conditions in institutions. The hospitals look to your Association for standards in the administration of the food problem in all its phases.

There are many problems connected with your work which lend themselves to further study and investigation, some of them are:

1. Hospital Planning and Construction as Related to the Dietary Department. A reliable fund of information on this subject is required, embracing at least such major considerations as location, materials of construction and floor plans for economical and efficient service. The relation of the dietary department to administrative, technical and service units of the institution requires earnest consideration. The ratio of floor space to patient load, the type of service and other practical problems have not been fully solved, and in many instances continue to be the subject of controversy.
2. Organization of the Dietary Department. A definite plan of department organization should be made, showing functions, relations and responsibilities, not only within the department but between it and other services of the hospital.
3. Administration of the Dietary Department. Undoubtedly this is a matter of diversified opinion when one sees the many variations in our institutions. Many instances of divided authority are on record which are not in accord with the approved executive principles of hospital administration. Here, too, guiding fundamental principles are needed to place this phase of hospital management on a proper basis.
4. Diet Therapy. Undoubtedly development in diet therapy has just begun. The dietitian, working with the clinician and the laboratory, can do much to promote this study. Every day new facts are being disclosed regarding diet therapy in its application to diagnosis and treatment.
5. Teaching Methods. As previously stated, the dietitian must share in the teaching function of the hospital. Improved methods of teaching student nurses and student dietitians are essential. Possibly in the future an attempt will be made to extend this teaching more effectively to doctors and internes.

There are undoubtedly numerous other problems which come to your mind, requiring individual and group investigation. What an opportunity you have to assemble from the best hospitals in the United States and Canada authoritative data on all these problems! This information

could be analyzed by various committees and arranged in manual form, which would be of extreme value to the hospital administrator. Such a manual, of course, should contain the latest and best information on the subject and be revised from year to year. Undoubtedly through this simple method a most valuable and effective contribution could be made to your work.

CONCLUSION

In considering this great development and the opportunities presented for investigation and research, we must not lose sight of the fact that the care of the patient is the first consideration; all activities should be based on the principle that the best interests of the patient be conserved at all times. If this is the guide to your work, it will succeed.

1. The science of hospital administration is constantly increasing in complexity, requiring investigation of all its phases.
2. The magnitude of the hospital field throws a serious responsibility on the hospital dietitian and offers unlimited opportunity for further study and investigation of all phases of food administration in the hospital.
3. The dietitian must participate in the four major functions of the hospital—care of the patient; the education of the student nurse and student dietitian, as well as the interne, where practicable; the promotion and preservation of health; and research.
4. The hospital executive seeks practical, adjustable standards that can be effectively applied under the varying conditions found in hospitals so as to promote more efficient and economical administration.
5. There are certain present-day problems associated with food administration in the hospital requiring serious deliberation and investigation, involving particularly hospital planning and construction as it affects the organization and administration of the dietary department, diet therapy and teaching methods.
6. A plan for research or investigation could be made through which valuable authentic data could be assembled and made available for all hospitals, in order to guide them better in their development.
7. All activities in research or investigation should be carried on with due regard to the best care of the sick and injured; at all times the merit of the work should be measured in terms of better care of the patient.

A PAY CAFETERIA

MABLE M. MacLACHLAN

Dietitian, University of Michigan Hospital, Ann Arbor, Michigan

The commercial cafeteria at the University Hospital, Ann Arbor, was established when the State of Michigan opened the new hospital unit. This was to be tried as an experiment in handling the food problem for employees. After three and a half years of successful business, the hospital administration recommends this system as a pleasing and economical method of food service for employees.

The primary purpose of the pay cafeteria is to serve the employees of the hospital; guests, such as friends of patients and patients waiting to be admitted, may also take their meals in this dining room. Medical students attending classes at the hospital are very glad of the opportunity to take lunch in the cafeteria from time to time. A guest charge of ten cents is added to the meal check of persons taking their meals in the cafeteria who are not employed by the hospital. This was found necessary as otherwise the number of outside guests tended to jeopardize the service to employees.

The cafeteria is a large, light and airy room. There are windows on three sides and striped, yellow voile curtains hung at the windows give somewhat the atmosphere of a tea room. The floor is laid with Armstrong linoleum in a black and white design. The majority of the tables are round and of dark brown mahogany, accommodating six or seven people. Eight small tables, seating two each, give variety in the dining room and are popular with the patrons. The steam table and cafeteria counter are in the dining room proper just at the right of the entrance. The tray and silver stand, although not a part of the cafeteria counter, is made to conform to it in size and material. The cafeteria counter is paneled in white enamel with nickel trim and the counter is white carrara glass. Glass plate shelving on nickel standards increases the space for food display. A refrigerated container for ice cream, a refrigerated space for bottled milk and a battery of urns completes the counter.

The dining room has a seating capacity of 175 people which seems to be ample as the guests are continually changing during the meal hours.

The average number served at the morning and evening meals is 190. At noon the average is about 450 people.

The menus are planned independently of the other units of the hospital but the preparation is carried on in the central kitchen under the supervision of the administrative dietitian. The food is transported to the cafeteria in an enclosed food truck and any extra quantities of hot foods not needed on the counter are kept piping hot in a steam table provided for bulk storage in the pantry. The room, adjacent to the counter, which is called the pantry, is about 9′ 5″ x 12′ 5″ and is used for food storage as well as a preparation room for salads and relishes.

The breakfast menu consists of: two kinds of stewed fruits and fresh fruits such as apples, oranges, bananas, grapefruit and other fruits in season; a choice of dry cereals and one hot cereal; bacon or ham, eggs, potatoes; toast, butter, doughnuts or cookies; tea, coffee, milk, postum and hot chocolate.

Typical breakfast menu

Grapefruit	$.10	Eggs	$.05
Apples	.05	Potatoes	.04
Oranges	.05	Doughnuts	.03
Bananas	.05	Toast, per slice	.01
Canned fruit	.05	Butter, per square	.01
Stewed fruit	.04	Coffee	.05
Jam	.03	Tea	.05
Dry cereal	.07	Milk	.05
Cooked cereal	.05	Hot chocolate	.05
Bacon	.05		

At noon the selective menu consists of: a broth or clear soup; two varieties of meat and a meat substitute; potatoes and two additional vegetables; four salads; cheese and relishes; pudding, fruit jello, pie and ice cream; tea, coffee, hot chocolate and milk.

Typical luncheon menu

Tomato and okra soup	$.05	Cut cheese	$.03
Roast beef	.10	Fruit jello	.10
Pork chops	.10	Rice and raisin pudding	.05
Macaroni and cheese	.10	Apple pie	.10
Mashed potatoes	.04	Ice cream	.05 or .10
Rutabagas	.05	Bread, per slice	.01
String beans	.05	Butter, per square	.01
Head lettuce salad	.15	Tea	.05
Tomato and cottage cheese salad	.15	Coffee	.05
Mixed fruit salad	.15	Hot chocolate	.05
Cabbage and green pepper salad	.15	Milk	.05
Relishes	.03		

The night menu is quite typical of that served at noon.

Typical dinner menu

Cream of lima bean soup	$.07	Relishes	$.03
Liver and bacon	.10	Fruit jello	.10
Meat pie	.10	Chocolate pudding	.05
Noodles a la creole	.10	Peach pie	.10
Fried onions	.05	Cake	.05
Potatoes	.04	Ice cream	.05 or .10
Head lettuce salad	.15	Bread, per slice	.01
Sliced tomato salad	.15	Butter per square	.01
Peach and stuffed date salad	.15	Tea, coffee, milk	.05
Asparagus and egg salad	.15	Hot chocolate	.05

No charge is made for second cups of coffee. For economical and satisfactory service of tea, the individual tea bag is used. Nickel cup covers are provided which prevent the beverage spilling into the saucers and have the added advantage of keeping it hot.

The menus are planned by the dietitian in charge of the cafeteria; copies of these, with the number of servings required of each food, are sent to the administrative dietitian. Accurate account of all food sent to the cafeteria is recorded by the chef and head baker. This is transferred to an interdepartmental requisition by which the main kitchen and bakery receive proper credit and the charge is made against the cafeteria. All requisitions are priced by the stores' accounting department. Supplies such as tea, coffee, milk, butter, salad material and canned and fresh fruit are requisitioned directly from the hospital stores to the cafeteria.

At the end of a month a statement of business is issued showing the amount of money taken in and the expenses which have been incurred during the month such as salaries, wages, food costs and cost of general supplies and cleaning materials. The following is a copy of a monthly statement:

Monthly Statement of Business

Income:		
Cash	$6,191.53	
State Patient Tickets	232.45	
Total Income		$6,423.98
Operating Expense:		
Salaries and Wages:		
Dietitian	$135.00	
Dishwashers	360.00	
Dessert Cooks	50.00	

Kitchen Help	$340.00		
Dining Room Help	832.51		
Total Salaries and Wages		$1,717.51	
Food from Main Kitchen	$1,355.39		
Other Food and Supplies	3,149.66		
Total Food Cost		4,505.05	
Total Operating Expenses			$6,222.56
Surplus			$201.42

	NUMBER	AMOUNT	AVERAGE SALE	AVERAGE COST
Breakfast	5,481	$ 878.19	$.160	
Luncheon	11,610	3,888.10	.335	
Dinner	5,905	1,657.69	.281	
Total	22,996	$6,423.98	$.279	$.261

The cafeteria is charged with the dietitian's salary, the wages of counter girls, checker, cashier, bus boy and porter. The average amount of time spent by kitchen employees in preparing cafeteria food is estimated and the cafeteria is charged with its share of the kitchen payroll. As dishwashing for all dining rooms is centralized in one unit, the cafeteria contributes its share to the expense depending upon the number of people served.

The individual items of food are sold at the cost price plus service as nearly as this can be estimated. For certain foods this figure may be above or below actual cost but it has not been found desirable to change the prices as long as the cafeteria shows a profit. Naturally the cost of materials changes according to the season of the year, and this part of the business is carefully watched but practically no change has been made in the cost to the customer in three years. The accompanying chart shows the average meal check and the average total daily food cost for each person for a period of six months.

MEAL	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Breakfast	$.159	$.159	$.160	$.158	$.159	$.152
Luncheon	.32	.329	.335	.331	.328	.319
Dinner	.283	.279	.281	.284	.283	.297
Total	$.762	$.767	$.776	$.773	$.770	$.768

The employees appreciate the fact that the hospital provides wholesome and attractive food at cost and they take a certain pride in their cafeteria. Complaints are rare. Employees are not requested or required to take their meals in the cafeteria; it is simply a convenience for those who choose to take their meals within the hospital.

This method of handling food service to employees eliminates much unnecessary waste of good food. The waste is practically negligible, as when food is purchased only that which is actually desired is selected. It is human nature to enjoy spending one's own money; the scale of wages of the employees is increased $5 per week or actually $22 a month, thus giving them the choice of buying their meals at the hospital or taking them at home. This method seems to give the employe a better understanding of the value of his wages in relation to his work.

After three years we find that the hospital is able to maintain a higher wage scale because the employee pays for his own food; a better type of employee is attracted to the work and there has been a gradual change to a more contented and stable group of workers. Appreciation is continually being extended by the out-patients and friends of patients who find the cafeteria a great convenience. The system has solved so many problems regarding food service that it is considered an indispensable addition to the hospital dietary department.

THE DIETITIAN'S PLACE IN HOTELS AND RESTAURANTS[1]

J. O. DAHL

Director, Readers' Service Bureau, Hotel Management and Restaurant Management Magazine

In the November issue of *Restaurant Management* Magazine, Peter Borras states very clearly his feeling about dietetics in restaurants. Mr. Borras is considered one of the best restaurateurs in America. His restaurants in Washington are patronized by people who have a high sense of food discrimination. I do not say that his feeling is typical of all in the restaurant industry, but it is quite general among the better class of restaurateurs. The following is his letter:

"To the Editor:

As a restaurateur, I want to take exception to Mr. William Childs' article in the July *Forum*. (Reviewed in *Restaurant Management's* Digest for September.) It seems to me that Mr. Childs oversteps the bounds when he undertakes to tell the public to forsake meats for the "more economic" and "more health giving" vegetables.

Whether a partial or a wholly vegetable diet is more conducive to health is debatable, and certainly not all individuals are constituted alike.

The public, that is the habitual restaurant patron, I find, cares little about calories and vitamins. Those are subjects restaurants should keep from meddling with. The question of calories is for the individual to determine according to his appetite and avoirdupois. To prescribe diets is the function of the medical profession and not of the caterer. Of vitamins there is so little known that it is preposterous for a restaurateur to tell his patrons anything about them.

When we enter a restaurant our purpose is to eat because we are hungry. We have our likes and dislikes, and we order according to our taste, our hunger, and our pocketbook. We will eat meat if we wish to, unless it doesn't agree with us or our doctor advises us not to. If we like vegetables best it is the restaurateur's business to have a large variety on hand to choose from. Some of us like ice water with our meals, and some do not. Some eat dessert and some do not. But a restaurant should have ice water and a good variety of desserts for those who have a sweet tooth. Whether people ought to gain or lose weight should be determined by themselves.

We will gain nothing but ridicule by trying to play the rôle of dietitians instead of our own, which, as restaurateurs, is to elevate the art of dining by

[1] Presented before the American Dietetic Association, Washington, D. C., October, 30, 1928.

giving the public well prepared and properly seasoned foods of substantial and intelligently concocted combinations. . . . ."

Certain correspondence schools and publications seek constantly to give the impression that the hospitality industry is eager to accept women. This is not the truth—women have to fight for every opportunity. They do not get high salaries, work short hours or have pleasant social conditions. They cannot, in a few weeks' time, train to become executives. The field at present is badly overcrowded because of glamorous advertising.

In a circular recently sent out by one school it was stated that leaders in the flourishing restaurant industry felt that there was room for at least 1000 more tea rooms in New York City. Tea room management was believed to be one of the most lucrative professions for women. At least three women were making a profit of $10,000 a year out of each of their shops and thousands were clearing two and three hundred dollars a month. Such statements as these are unfortunate, but even trained women read these stories so frequently that they come to believe them.

I had a copy made of the following letter because it is typical of several that we receive each week from women who have taken these courses:

My dear Mr. Dahl:

Your name has been given to me by a lady who saw your *Restaurant Management* at the library. I hope I am not imposing on you in asking for your help.

I am a very good cook and I have a reputation for being a good hostess. I know all about dietetics so I am sure I could make good in a position as manager.

I have taken the Blank Training Course and passed with high marks. If you can find any place for me, I will be thankful.

Very truly yours,

I wrote to her asking where she had learned "all about dietetics." "We had a special lesson on it in our course," she replied, and added "I am also capable of taking a dietitian's job."

What is a dietitian? The answer to this question is most important in determining the relation of dietetics to hotels and restaurants. Who shall have the privilege of calling herself a dietitian? I know of a large chain of restaurants that professes to employ a dietitian for each of their shops. Investigation will show that these girls are not graduate dietitians. They are simply trained home economics women. There is no reason why these girls should be trained dietitians; all they do is to act as head waitresses—to call them hostesses or dietitians is merely to

gratify their personal desire for a dignified title, when, after all, they do nothing but show patrons to their tables.

The American Dietetic Association should take note of the claims of advertisers; when they find instances where hotels or restaurants are advertising that they have a dietitian in charge of certain work, they should investigate. Occasionally hotel and restaurant men use the word dietitian loosely. They may have hired a woman, such as the one whose letter I have just quoted, who stated that she "knows all about dietetics."

During the past year, we have had two requests from hotels for dietitians. We have also had two requests from large food companies who make a business of selling to hotels, restaurants and institutions. The salaries in the food companies were higher than in hotels and restaurants. The highest salary that I know of for a dietitian in hotel or restaurant work is $50 a week. I understand that the salary runs as high as $100 a week in the food company field. Certainly it is unfair to give the impression that there are great opportunities for women in hotel and restaurant work when salaries are as low as $50 a week.

I received a letter several days ago from a friend of mine who is an executive in a large chain organization that had tried employing dietitians for some time. He stated that his organization no longer do so, because of the attitude of the dietitians they had employed:

"They couldn't get along with our executives nor with the cooks," he said in his letter. "They gave us the impression of trying to run our business and tried to make over night changes in menus which had heretofore been successful enough to build up a huge business. It was impossible for us to get them to make minor changes in our menus since according to their training what we had been doing was all wrong."

I wrote to two hospital superintendents whom I knew very well, telling them what my friend had said. They admitted that what he had said was, in a sense, quite true. "Dietitians," one of them said, "are always ready to fight for the principles of their theoretical training, whereas, at times, in business it is necessary to deviate from the principle which is right in theory."

I know that the serving of food is a woman's business. Each year I have seen a gradual growth in the number of women in attendance at the National Restaurant Show. At the last meeting half of the delegates must have been women.

About two months ago we offered a specialized menu service in *Hotel*

Management and *Restaurant Management* Magazines. About 20 per cent of the requests from *Hotel Management* and about 40 per cent of the requests from *Restaurant Management* were from women.

Nearly 40 per cent of all the Readers' Service inquiries that come in to the magazine are from women. A large percentage of our book sales are made to women. This proves that women with training and capital make up a very large part of those engaged in the restaurant business; they are also numerically increasing each year.

The constant decline of business in a certain chain restaurant organization cannot be entirely chargeable to their policy of going "vegetable wise." I believe that there is something else that is fundamentally wrong. With schools turning out "food wise" graduates and certain newspapers and magazines carrying worth while syndicated dietary instruction, there is no reason in the world why a sensible attitude toward dietetics should not fit very well into hotels and restaurants.

Many hotel and restaurant men believe with Peter Borras that they are followers, not leaders. They say that it costs too much to educate the public, and that it is best to follow directly behind the public trend toward right food rather than taking a step or two ahead of it.

Counting calories slows up service; to my mind this is one of the fundamental dangers of going too extensively into dietetics in restaurants. In spite of the fact that probably only a small percentage of the people know how to count calories or care about counting them, the few who do reduce materially the turnover per chair per day. In cities, especially, a restaurant operator must get a high turnover since rents are high; anything, therefore, that slows up service must fight for the privilege of existence.

If I were to go back into the restaurant business today, I would employ a dietitian—not as a regular member of my staff, but as a consultant. I would not let her take the romance out of eating by making the selection of food a mechanical process. I would expect her to make up children's menus; she should make up balanced table d'hote menus, plate luncheons or club meals. I believe that the public should eat properly, but I know that their ignorance or carelessness makes it almost impossible for them to select a well balanced meal from the average a la carte menus. It should be the hotel and restaurant man's duty, therefore, to serve well balanced combinations which can be ordered by the patron without any need for special study of the number of calories.

I would expect my consultant dietitian to work out a series of menus for increasing weight and decreasing weight, using local foods and based

on local food costs. Her name would be listed on my menus, so that any of my patrons who wanted special menus could consult her.

If I should employ a dietitian as a consultant, I could get her services at a lower figure than if she were on my regular pay roll, and she would have time to do other free lance work for food companies and possibly other hotels and restaurants.

There is no question but that if dietitians were willing to go after business they could find many consulting positions. Many teachers of dietetics could act as consultants for local hotels and restaurants. We have had three such requests during the past year and, so far as I know, those who availed themselves of a consulting service of this nature are very well satisfied.

It is not my intention to discourage the profession of dietetics. The future of our business is dependent upon wholesome, well-balanced food. It will probably be a slow process, but I feel assured that members of this Association will eventually play a very important part in the hotel and restaurant business.

THERAPEUTIC DIETS AS A VARIATION OF THE GENERAL DIET AT MICHAEL REESE HOSPITAL[1]

KATHERINE MITCHELL THOMA

Michael Reese Hospital, Chicago

In November, 1927, the Diet Kitchen at Michael Reese Hospital was closed. Since that time all therapeutic diets except diabetic diets have been served as a variation of the general diet. This change was made as an educational experiment. The routine developed has proved helpful from an educational standpoint to patients, student nurses and student dietitians. It has also been successful from the administrative viewpoint; closing the extra kitchen has meant a reduction in number of employees—and since the food is prepared and distributed from one rather than two kitchens, some food waste is eliminated.

This move to close the Diet Kitchen came about gradually. For two years Diet in Disease has been taught to students as it is presented in "Talks to Nurses on Diets" by Dr. Ruth Wheeler. Undoubtedly many know this excellent book and are familiar with Dr. Wheeler's method of presenting therapeutic diets as a modification of the normal diet. One may recall these sentences:

"By far the most important diet in the hospital is the general diet. If it is properly planned it is better balanced than any special diet can be; it has greater possibility of variation; it contains all the food constituents needed by the body in the proper proportions. Many diseases are caused or aggravated by inadequate diet, and the general diet in a hospital in the hands of the nurse and the doctor should be an important means of education in nutrition for the patients, so that they may leave the institution with more knowledge of their own food needs than they had on admission, with their diet controlled more by the needs of their bodies, and less by prejudice."

In class the students were taught to consider normal nutrition of primary importance; to know the essentials of an adequate diet; to check their own food intake with their own requirements. They were taught to see the educational possibilities of the general diet in the hospital and were shown that the patient might be taught the fundamentals of nutrition, using the food on his tray as illustrative material. Therapeutic

[1] Presented before the American Dietetic Association, Washington, D. C. October 30, 1928.

diets were presented as modifications of the normal diet. This worked out well in class, but when the same students were sent to the dietary department for six weeks of practical work with diets, they found themselves spending all their time working with therapeutic diets and considering patients for whom "special diet" orders had been written. The students had no time to observe the general or normal diet. The patients not on special diets were not regularly visited nor given any instruction in regard to good food habits. No study of their food intake was made; this was done only for patients on therapeutic diets or so-called special diets. In other words, the students were taught to realize the importance of normal nutrition and to look upon the general diet as the example of normal nutrition; they were then given practical work where emphasis was placed only on planning and serving of therapeutic diets.

In an effort to overcome this inconsistency and to put into practice what was preached in class, the present system was worked out. The mechanical details are surprisingly simple. When the menus are written in the dietitian's office, two diets are planned, one is the full or general diet, the other is a soft, meat free diet. Some foods can be used on both menus; potatoes, dessert and sometimes the vegetables on the full diet are free enough from coarse cellulose to be used on the soft diet. These two general menus are used as a basis for all therapeutic diets. The menus for the therapeutic diets are written by student nurses and student dietitians and checked by the therapeutic dietitian; these are literally a modification of the general diet. In many cases the menu reads "Full Diet *plus*." If it is High Caloric, extra cream, extra butter, jelly or bacon is added and the patient's name is put on the list for a High Caloric lunch. If it is High Cellulose, bran muffins for breakfast and double servings of fruits and vegetables are given. If it is an obesity diet, the foods allowed are all written out on a special menu but are principally selected from the food on the chart. Fruit may be substituted for dessert and obesity mayonnaise used instead of the regular mayonnaise. The gastro-intestinal diets requiring a bland smooth food can use most of the foods on the soft diet. Diets for anemia are an easy variation of the full diet. Restricted protein diets can be planned from the foods on the full menu or on the soft diet.

Diet calculations are all approximate and based on food values of average servings. The table used is adapted from the table of food values of average servings, published by the American Red Cross some years ago and supplemented by a table given in Dr. Wheeler's book.

The food is all prepared in the main kitchen and distributed in electrically heated carts. Most of the foods are sent up in bulk, but each

cart is provided with a rack of shelves in which single servings of extra foods may be placed when necessary.

All the large quantity cooking is done at the regular cook's table and ranges. This includes purèed vegetables and fruits for the soft diets. If some salt-free food is needed, the chef is told the number of servings and plans accordingly. One small stove is reserved for the diet cook. At her work table diet students prepare what few extra dishes are needed. Desserts are all made by the regular pastry chef. He prepares the needed quantity of custards, gelatins, etc., as well as the bran wafers for diabetic diets and salt-free bread for salt-free diets.

A student in the dietary department, either a nurse or a dietitian, is assigned to each division of the hospital. This student, supervised by staff dietitians, is responsible for the nutrition of the patients on the division assigned to her. Her responsibility begins in the kitchen where she checks over the food cart for her division, insuring that all the foods are in sufficient quantities for her patients. She then goes to her division of the hospital where she serves and checks each tray, assisted by a student nurse on floor duty. A ward maid carries the trays. Each student visits her patients at least every other day, although some special patients are visited more frequently. One of the dietitians accompanies each new student on her first day and twice a week regularly thereafter.

The student dietitians keep diet histories of all their patients. The student nurses keep histories on a group of assigned patients, some on general diet, some on soft, some on post-surgical routine, and some on therapeutic diets. The form used for these diet histories is seen in the accompanying chart. The patient's requirements are figured and his home diet habits, regarding which suggestions are sometimes made, are recorded. Perhaps he has not been getting sufficient fruits and vegetables; he may need more milk, another egg, or meat more regularly. During these repeated visits the student interests the patient in the fundamentals of nutrition—why he must include milk for calcium, what foods supply iron, vitamins, bulk. If a patient is overweight, he is told what foods can be safely reduced in quantity; if he is underweight, he is told what foods to emphasize. The students have daily conferences with the dietitians supervising this work. In addition to frequent individual conferences, there is also a group meeting once a week at which time general routine and special cases are discussed. Each patient's food intake is calculated approximately at least once a week; this means that the students are trained to watch trays for returned food.

MICHAEL REESE HOSPITAL

Date admitted.....

NAME ..... DIAGNOSIS..... DR..... Date discharged.....

Age..... Weight..... Height..... Optimum Weight..... lbs..... kgms.

PROTEIN REQUIREMENT..... (1 gm. per kgm.) CALORIC REQUIREMENT. { Hospital.....x.....calories; Active .....x.....calories; Occupation.....

HOME DIET HABITS

Breakfast Dinner Supper

.....

.....

.....

.....

Estimated food value of home diet.....Does it meet caloric requirement.....

Does it furnish protein requirement.....How much meat..... Eggs.....

Adequate calcium.....How much milk daily.....

Adequate iron.....How often fruit.....Green vegetables.....Whole grain cereal.....

Adequate bulk.....Elimination.....

Vitamins supplied by.....

HOSPITAL DIET HISTORY

DIET ORDERS Food Intake (Calculated at least once a week)

	Protein	Calories	Calcium % Daily Reg.	Iron % Daily Reg.	Appetite	Patient's Weight
.....						
.....						
.....						
.....						

Significant Laboratory Findings.....

.....

Instructions to Patient.....

.....

Patient's Attitude.....

.....

The students have access to patients' charts at all times; the supervising dietitians instruct the students in the interpretation of laboratory reports, blood and urine analyses, basal metabolism rates, medical histories, etc. Nurses are assigned to this diet work for four weeks and student dietitians eight weeks. Each student selects one patient for a case study.

There are many weak spots in the above outlined routine, but we feel that such a procedure does make it possible for us to reach all the patients instead of just a special few, and we believe it is an effective way to teach normal nutrition and diet therapy to patients, student nurses and student dietitians. It would not have been possible for us to effect such a change in our organization if we had not had the cordial coöperation of Miss Dora Saumby, the superintendent of nurses, and the help and encouragement of Dr. Herman Smith, the superintendent of the hospital.

EDITORIAL

Dr. Joseph Goldberger

The untimely death of Dr. Joseph Goldberger is a great shock to those who were directly acquainted with his bouyant personality and a blow to the advancement of the science of nutrition and of professional dietetics. Almost from the beginning of the period in which pellagra has been a serious disease in the United States, Dr. Goldberger had been prominent in both laboratory and field investigations and in practical measures for the control of the disease. An early and outstanding accomplishment was his demonstration upon a group of convicts who, in consideration of a promise of release from the prison camp upon completion of the experiment, submitted to a dietetic restriction which brought about a mild degree of pellagra. This is perhaps the one case on record in which a dietary deficiency disease has been produced experimentally in human subjects.

Throughout nearly two decades of active investigation and discussion Dr. Goldberger has been a leading champion of the view that pellagra is essentially a nutritional disease. With the progress of the studies in his own and other laboratories have come changes of view as to the chemical nature of the factor or factors involved, but always the group of professional workers in the United States Public Health Service, among whom Dr. Goldberger usually took the leading part, have constantly maintained that nutrition plays a more significant rôle in pellagra than does infection, if the latter is to be regarded as an essential factor of the clinical picture of pellagra, which indeed Dr. Goldberger has seemed inclined to doubt. Evidences adduced by other investigators to the effect that infection is involved in pellagra seem to many detached students of the problem too strong to be dismissed, but it seems to be true that for practical purposes pellagra may be regarded as almost if not quite completely preventable (and, when not too far advanced, controllable) by suitable diet. There seems to be no doubt that the dissemination of this view both among the medical and dietetic professions and among the people generally in the South has very greatly minimized both the incidence and the severity of pellagra, and in many regions led to its practical eradication, where twelve or fifteen years ago

it was one of the most serious diseases. This result may be credited in very large measure to Dr. Goldberger's indefatigable labors in the laboratory, in the field, and in educational propaganda in behalf of better balanced diet and more adequate supplies of pellagra-preventing foods. To him also is due a large share of the credit for the definite demonstration of the multiple nature of vitamin B and the chief credit for emphasizing the probability that one of the substances of the vitamin B complex is an important factor in the pellagra problem.

It was characteristic of Dr. Goldberger's conscientious and forceful personality that in spite of his illness he so generously came in person and delivered an address before members of this Association at the recent Washington meeting. The JOURNAL is deeply honored to publish in this issue what is probably the last paper Dr. Goldberger prepared on the subject of pellagra.

WHAT IS A DIETITIAN?

The paper by Mr. J. O. Dahl of *Hotel Management* and *Restaurant Management* Magazines, which appears in this issue of the JOURNAL, should be of interest to members of our profession since it doubtless illustrates the attitude of the average restaurant and hotel man toward dietitians, and in a sense indicates their conception of the term "dietetics." It may also reflect the somewhat unhappy point of view of certain members of the general public toward dietetics and dietitians.

Mr. Dahl has clearly brought out the fact that the title "dietitian" is carelessly assumed by untrained and incompetent women. The nurse remedied such a situation through registration. The American Dietetic Association, with its large and growing membership, is now in a position clearly to define the trained dietitian's status through state or national registration.

The dietitian's influence in shaping the food habits of the nation has been demonstrated. Her teachings have increased the consumption of milk to a marked degree; fresh vegetables are available at a reasonable price throughout the winter months because of the demand that she has created. Realizing the inadequacy of what might be termed the typical American diet—meat, potatoes, white bread and pie, she has had to greatly stress the beguiling nutritive components of milk, green vegetables and fresh fruits. As a result, the average layman seems to believe that she (the dietitian) would have humanity revert to a lacto-vegetarian regime, and know nothing of the gastronomic joys (and dietetic virtues) of a juicy steak, a well-baked potato or a worthy sample of our justly

famed American dessert. Dietitians who have the sound academic training and practical hospital experience, required for membership in our National Association, have a sane impression of the meaning of a well-rounded diet, in which meat, white bread and much maligned sweets, as well as whole cereal products, vegetables, fruits and milk have their place. They appreciate that one may wisely yet joyfully eat. It is indeed unfortunate when their teachings are misinterpreted by food faddists and others who are coated with a thin veneer of dietetic misinformation.

The Dietitian in History

Dr. F. G. Smith, Assistant Surgeon General, United States Public Health Service gives an amusing historical account, in the September, 1928, *Journal of the Outdoor Life*, of the embryonic development of the dietitian. Fifteen years ago the medical officer in charge of a 200 bed marine hospital was authorized to engage a dietitian. He found that there were a great variety of opinions among hospital executives regarding her functions. In one hospital "she" was a whiskered professor of mathematics engaged in ponderous calculations. In another hospital a young and promising superintendent said he had six dietitians, who proved to be unlettered maids preparing "light diets" under the direction of the head cook.

We look on the dietitian as a recent discovery, but Dr. Smith associates the good works of primitive dietitians with the dawn of civilization. The Greeks called her the tenth Muse, Gasteria, who presided over the aesthetic joys of taste. He feels that even Pan may have been a dietitian since he is reported to have taught mortals the art of making bread. The King of the Feast, or dictator, elected by Romans and Greeks to preside over great banquets, and whom guests had to obey, obviously had the soul of a dietitian and was one of her forerunners.

Cadmus, who taught Greece the use of letters, had been a cook to the King of Sidon. Epicurus was a great culinary chemist; it was he who, having exhausted the treasury in inventing new dishes, killed himself because of lack of further funds to carry out his researches. It was the *procurator*, or major domo, who presided at feasts in the heydey of Rome, however, who is most nearly the counterpart of the modern dietitian. This dignitary descended from his post of observation at banquets and made rounds inspecting the peacock eggs and determining if the grasshoppers were fried to the correct light brown color. Savarin's story of a later dietitian and a turbot is well known and illustrates the

infallible ability of many contemporay dietitians. A turbot, esteemed as a great delicacy, had been duly heralded at a banquet, when one of the bearers of the dish slipped and the turbot dashed to the floor. Guests grew pale and consternation filled the hall, but Savarin's dietitian, rising to his full height, said, "Bring forth another turbot!" And another turbot of like proportions and even greater delicacy appeared. In sad contrast, we have Watel of the time of Louis XIV who, in despair over the non-arrival of an important fish to be served at a state banquet, fell on his silver skewer and died. Dr. Smith offers a practical suggestion to modern dietitians; he says that Sturgeon, writing in 1822, discussed the temperaments of cooks and suggested that when food is not well prepared and seasoned the cook's sense of taste has been deranged. "Bleed him, bleed him twenty ounces and give him an emetic. Remove him from the kitchen and place him on a strict diet and cooling drinks for several days."

Dr. Smith admits that it was a dietitian, or at least a baker, who saved the city of Vienna from a surprise attack. Since that time every orthodox Vienna roll is crescent shaped, in memory of the invading Turks and by special request of the hero of the occasion. When the Gauls besieged Rome it was another baker, with the strategy of a dietitian, who, when starvation was imminent, had bread made of all the flour in store and threw it to the enemy to show that Rome feared no famine.

Today, Dr. Smith believes, the dietitian has come to the zenith of her usefulness. He feels that her help is as vitally important as that of the physician or pharmacist in the treatment of certain diseases. He concludes: "What the nurse did to the fever wards of Florence Nightingale's time, the dietitian has done to the mess hall and galley of a later period."

M. P. H.

CURRENT COMMENT

National Affiliation[1]

The American Dietetic Association is making an effort this year to formulate plans for affiliation of local and state associations that will increase the number of such affiliated groups, and make the relationship between them and the National Association a real bond of mutual

[1] The following is a list of local and state affiliated associations to date: Massachusetts, California, Washington State, Chicago, Rochester (New York), Quebec (Montreal, Canada), Ontario (Toronto, Canada), Minnesota.

helpfulness and active coöperation. The American Dietetic Association is still very young. It takes time to develop a strong central organization, and much has already been accomplished.

Probably its weakest point now is its relationship with the many active local associations in the country. The experience of other similar National organizations has always been that they only became a real power professionally as they develop successful plans for close affiliation and coöperation with all groups of local and state members.

With such people on our Advisory Board as Dr. McEachern, whose broad vision of the rôle of the dietitian has been such an inspiration to us, and Miss Carrie Hall, who has had so much experience in the National Nursing organizations, the possibilities for the future professional status of the dietitian are very bright.

In the present number of the JOURNAL appears a statement of the proposed activities of each section of the American Dietetic Association. These programs of work can only be carried out satisfactorily with help from each local group; if carried out successfully they will give results of great value to all dietitians. The December (1928) JOURNAL gave reports of all National Association activities. How much more could have been done if all dietitians were working together on these problems of mutual interest.

Letters are being sent to the presidents of local associations of dietitians, asking for suggestions that will make it possible for all such groups to affiliate with the National Association, and that will help in working out plans for widest usefulness for service. It will be greatly appreciated if individual members of the Association who read this feel personally responsible for sending suggestions they may have on this important problem to Martha Koehne, University of Tennessee, Knoxville.

MARTHA KOEHNE,
First Vice-President, American Dietetic Association.

LIFE MEMBERSHIP IN THE ASSOCIATION

In the Constitution of the American Dietetic Association the following statement is made concerning membership:

Life Members: Any active member of this Association may become a life member with all the rights and privileges of an active member by the payment of fifty dollars ($50) into the treasury of the Association. Life members shall be exempt from the payment of dues.

On October 29, 1928, this was amended to read:

Life Members: Any active member of this Association may become a life member with all the rights and privileges of an active member by the payment of seventy-five dollars ($75) into the treasury of the Association. This shall include subscription to the Journal of the Association. Life members shall be exempt from the payment of dues. This amendment shall become effective one year from the date of this annual meeting.

Up to the present time we have twelve life members: Dr. Ruth Wheeler, Anna E. Boller, Elizabeth Edwards Thorp, Helen Pond, Mary Pascoe Huddleson, Virginia Ray, Annie Laird, Esther Latimer, Lenna Cooper, Katherine Mitchell Thoma, Mary Huhn and Florence Shippee. The money paid into the Association for Life Membership is used for investment rather than for current expenses as in the case of annual dues. The interest, however, from the investment is used for current expenses.

There are alternative plans for the payment of life membership dues. First, until October, 1929, a payment of fifty dollars cash will be accepted as full payment. Second, if a deferred payment plan is desired the seventy-five dollar fee will have to be taken as a basis. This plan would mean a payment of twenty dollars the first year and fifteen dollars for the succeeding four years making a total of eighty dollars paid to the Association. It is necessary to make an additional assessment on the deferred payment plan in order to cover the loss in yearly interest since during the first year only twenty dollars would be available for investment instead of seventy-five, the interest from this amount would, of course, be much lower than the sum received from the annual dues of a member.

Interest in the profession and the Association usually is not merely temporary; active interest can only be maintained through actual participation in the progress of the Association. Life membership entitles a member to all the rights and privileges of active membership plus a life subscription to the JOURNAL, even though this evolves later into a monthly rather than a quarterly publication.

Additional information can be secured by communication with the Chairman of the Committee.

(Signed) Life Membership Committee,
THELMA TUBBS, *Chairman*,
Peter Bent Brigham Hospital,
Boston, Massachusetts.

Making Dietetic History in England

New Health, for November, 1928, a monthly journal published in England and edited by Sir Arbuthnot Lane, reports the creation of new dietetic posts in three London Hospitals. St. Thomas's opens for the first time its forthcoming session with a University Chair in Dietetics, while two women, trained at King's College for Women, London, are taking up hospital appointments. Miss Elspeth M. Marshall, who took a three years' course in domestic science at King's College, with a degree of B.Sc., has started her duties at University College Hospital, while Miss M. A. Abrahams, an M.A. of Oxford, who has studied dietetics in the United States as well as domestic science at King's College, is now in charge of the Dietetics Department at St. Bartholomew's.

The London Hospital was the pioneer in paying especial care, supported by practical and technical knowledge, to dieting. A special department was established there nearly twelve months ago, and has been running with considerable success.

Composition of Fresh Fruits

New summary tables on the chemical composition of fresh fruits have been issued by the United States Department of Agriculture. Data on 67 kinds and varieties of fruits and 31 fruit juices are included in this compilation by Charlotte Chatfield and Laura I. McLaughlin of the Department's Bureau of Home Economics. Reliable analyses printed in this and other countries and unpublished data from coöperating Federal and State laborarories were used as the basis of these figures. It is believed that these figures more nearly represent the composition of fruits now grown and marketed in this country than any other extensive list of analyses heretofore published.

Protein, carbohydrate and all the other chemical constituents are given in percentage of the edible portion of each fruit. In making the tables particular care was taken to determine what part of the fruit was considered refuse in making the analyses, and to designate the refuse percentage as skin, seeds, or other inedible portion. As a further aid to accuracy, the botanical as well as the common name is given for each fruit. For varieties that differ markedly in composition and for types grown in different localities, separate averages are given. Copies of these tables may be obtained free as long as the supply lasts, by writing to the United States Department of Agriculture for Circular No. 50-C, "Proximate Composition of Fresh Fruits."

Food Adulteration

Gross and flagrant adulteration in many food products was widely prevalent before the enactment of Federal and State food control laws, according to officials of the Food, Drug and Insecticide Administration, of the United States Department of Agriculture. Instances of adulteration before the enactment of this food control law were, among others, the molding of chicory and of clay into the form of coffee berries colored and flavored to represent coffee; white stone ground into a fine powder and used to adulterate soda, sugar, and flour; "terra alba" or white earth for use in confectionery and cream of tartar; confectionery coloring material containing lead, mercury, arsenic and copper; cayenne pepper adulterated with red lead; mustard with chromate of lead; curry powder with red lead; vinegar with sulphuric acid, arsenic and corrosive sublimate; milk adulterated with water and artificial milk made synthetically which did not contain one drop of the genuine article.

Fortunately for the consumers and the vast number of honest manufacturers who put out good products, most of those gross and flagrant forms of adulteration no longer are practiced, though some may occasionally occur in isolated instances, say the food officials. The marked improvement in the quality, wholesomeness and truthful labelling of food products that has been brought about in the meantime, they say, is due principally to the enactment and enforcement of Federal and State pure food laws, and to the increasing realization on the part of manufacturers that it is good business to put out only sound, wholesome products truthfully labeled.

Federal and State food officials have continued to exercise systematic and effective supervision of the operations and the products of food factories. While the great majority of food concerns today put out products fully complying with all food laws, there is always a small minority in every industry who will take advantage of any relaxed vigilance on the part of food officials to make a quick, illegitimate profit by adulteration. That constant vigilance by food officials is still necessary is evidenced by the fact that hundreds of seizures and prosecutions are made every year because of the shipment within the jurisdiction of the food and drugs act of adulterated or misbranded foods. The adulteration found today affects the pocketbook more often than the health, consisting principally of the substitution of a cheap substance for some normal ingredient that costs more. Only occasionally is the public health jeopardized by a type of adulteration that renders the product injurious to health, but these occasions require prompt action to insure the protection contemplated by food laws.

United States Civil Service Examination

The United States Civil Service Commission announces the following open competitive examination for dietitian. Applications for this position must be on file with the Civil Service Commission at Washington, D. C. not later than July 1. The examination is to fill vacancies in hospitals of the Veterans' Bureau and the Public Health Service throughout the United States. The entrance salaries are $1,800 to $2,100 a year. Higher-salaried positions are filled through promotion. The duties, under direction, are to requisition and inspect all food supplies for both patient and personnel; to plan menus, both normal and special; to supervise the preparation and serving of all dietaries; and to perform related duties as assigned. Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or from the secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

Proposed Activities of the Diet Therapy Section for 1929[1]

The Diet Therapy Committee has planned to carry out its work along the lines of previous work done. Six lines of endeavour present themselves, namely:

1. To carry on the work with case histories already so ably started.
2. To adapt adult therapeutic diets to children's diet needs.
3. To standardize food composition tables by (*a*) collecting authentic sources of figures used; (*b*) collecting data on figures used by representative institutions throughout the country; (*c*) recommending standard as result of these studies.
4. To work out simple quantitative as well as qualitative standards for normal and therapeutic diets. To collect and summarize such material as is already available along this line.
5. To abstract articles dealing primarily with diet therapy. To keep such material available for distribution upon request of members.
6. To stimulate the teaching of diet therapy to college students in their senior year if they plan to enter the dietetic field. To recommend the teaching of such courses by a person who has had practical hospital experience.

Respectfully submitted,

Helen B. Anderson,
Chairman, Diet Therapy Section, American Dietetic Association

[1] Received too late for publication with other Section Reports.

BOOK REVIEWS

The Elements of the Science of Nutrition. By Graham Lusk, Ph.D., Sc.D., LL.D., F.R.S. (Edin.). Fourth edition, reset. Pp. 844. Price $7.00. Philadelphia: W. B. Saunders Company, 1928.

This book is too highly revered by every serious student of nutrition to require any general commendation from the reviewer. It has been, for over twenty years and through three editions, a reference book of clarity and accuracy touching all the fundamental phases of the science and illuminating them not only by copious citations from original researches, but also by apt illustration and arresting comment.

"The casual observer sees the moving train but the expert engineer knows how and why the wheels go round." Professor Lusk is the expert engineer, who takes us as far as possible into his confidence and instructs us simply and clearly regarding the processes of metabolism, the influence upon them of food and work, the characteristics of a normal diet, food requirements during growth, and the phenomena of certain metabolic diseases.

The fourth edition has been entirely rewritten and enlarged to the extent of ten new chapters. What was a mere addendum to the introduction in the third edition has been made into a separate chapter (II) on the Nature of the Feces. The discussion of the regulation of temperature has been expanded into one chapter (V) on the Regulation of Temperature and Basal Metabolism and another (VI) on the Physical and Chemical Regulation of Body Temperature and the Influence of Climate.

There are new chapters on the Constancy of the Basal Metabolism and the Effect of Undernutrition upon it (VII) and on Oxidation and Reduction (VIII).

The discussion of the influence of protein has been extended to include its specific dynamic action (VIII); and that of the influence of the ingestion of carbohydrate to include the influence of carbohydrate on protein metabolism and protein retention (XV).

Other welcome additions are two brief chapters on the Influence of the Thyroid (XXII) and of the Parathyroids and Pituitary. As the author says, while the literature regarding the action of the internal secretions is large, much of it is crudely unscientific, and it is gratifying to have the siftings of a keenly discriminating mind presented for the consideration of the reader.

The various types of glycosuria are now presented in three chapters instead of one:—Metabolism in Experimental Diabetes (XXIV), Diabetes Mellitus (XXV), and Renal Glycosuria and Some Other Anomalies of the Carbohydrate Metabolism (XXVI).

Throughout there is fresh material, bringing each topic up to date. For instance, in the chapter on A Normal Diet there is a new section on the Salts of the Diet, and in that regarding the Nutritive Value of Various Materials used as Foods, due attention is given to the various vitamins, and biological differences in proteins. The discussion "Food Requirements during Growth" has been enriched by new charts derived from recent comparative studies of the growth of man and animals.

A delightful new touch which does much to put one *en rapport* with the scientific enthusiasm of the author is the selection of quotations, one of which introduces each chapter.

"My custom in the matter of chemical experiments is never to believe any of them until I have made experiments myself and tested them"—Carl Wilhelm Scheele (Chap. III.)

"Think, reader, for thyself, so God allow
Thee profit from thy reading, think I say."
—"DANTE (Chap. VII).

"The proper nutrition of man concerns no one, not even those classes which should take the subject most to heart, and it is rare to find anyone who has a proper understanding of the subject. This short-sighted attitude is because such knowledge cannot be expressed in terms of money. It is analogous to the short-sightedness of the peasant who gives more attention to the nutrition of his cattle whose meat and milk he sells, than he does to that of his children."—Carl Voit (Chap. XVI).

"Is not the Nile very low? . . . . You must give my victuals to my people while they are doing work; mind this! . . . . Make the most of all my bread. Dig the ground with your noses in the work. Be very active; remember you are eating my bread"—Letter from a father visiting in Lower Egypt to his son living at home in Upper Egypt. Written about B.C. 2001. Found in the tomb of Ipy at Thebes (Chap. XXIII).

"Seek to understand things; their utility will appear later. First of all it is knowledge which matters."—Charles Richet (Chap. XXVI).

When the third edition was published, in 1917, the author stated that he had no intention of revising it, and who could wonder at his reluctance to undertake again such a huge task? Every student of nutrition owes him a debt of gratitude for extending his critical review to the last decade, which has been so rich in biological research, and for making the new volume more fascinating than any of its predecessors.

MARY SWARTZ ROSE,
Teachers College, Columbia University.

Food, Nutrition and Health. By E. F. McCollum, Ph.D., Sc.D., and Nina Simmonds, Sc.D. (Hygiene). Second edition, Revised. Pp. 148. Price $1.60, postpaid. Baltimore: Published by the authors, East End Post Station Box 25, 1928.

This book, as stated in the preface, is written to meet the needs of the general public for a non-technical account of the researches in foods and nutrition. Essential facts necessary to an understanding of what can and what cannot be accomplished through diet are presented. The Second Edition contains revisions in accordance with recent findings, and is written in simple, concise and easily available form. Practical suggestions are also given for menus and food combinations.

M. P. H.

Hows and Whys of Cooking. By Evelyn G. Halliday and Isabel T. Noble. Pp. 179. Price $2.00. Chicago: University of Chicago Press, 1928.

It is a satisfaction to find a book which offers such a clear presentation of the scientific principles underlying the various cookery processes. The aim of the authors as stated in the foreword, "to find out how to prepare really good food—the best possible according to our standards—and to put into words the essentials of each cooking process down to the smallest details," has been carried out. With a background of excellent research work and teaching at the University of Chicago they are in a position to present information that should prove invaluable to dietitians and teachers.

The chapter on vegetables evidences a fine sense of appreciation of the aesthetic (from the standpoint of taste, odor and color) as well as the nutritional attributes, of these foods. They wisely caution against overcooking, since "tenderness," not being a fixed value, varies, of course, with the person who makes the test. The pertinent suggestion is made that vegetables be called "done" when they still retain a little of the crispness most people find agreeable in raw vegetables. Apropos of this, one might question whether the time allowed by the authors for cooking peas and young carrots is not too lengthy. Naturally the degree of freshness and youth of these two vegetables—whether they enter the pot via the kitchen garden or following a 24-hour cross country trip—influences materially the cooking period. One also questions why no mention is made of methods

and time for cooking corn—that universally ill-cooked and impolitely eaten vegetable when prepared on the cob.

Armed with the "hows" and "whys" of cooking as outlined by these authors, and with an inborn sense of proper discrimination, there is no reason why the American cook could not produce a finished vegetable poem comparable with the best efforts of France, and appropriately served in French style as a separate course, so that the perfect blend of delicate vegetable, butter and seasonings may be properly savored.

The authors show a commendable patriotic spirit in devoting as many pages to pie as they do to vegetables. This reader was interested and *pleased* to know that fingers are placed before knives as a medium for incorporating fat and flour. A fascinating description is given of the correct manipulation of pastry ingredients in order to produce a flaky pastry "tender enough to cut with a fork, but not so tender that it crumbles." The factors of success in the preparation of muffins, cakes, biscuits, pastry, candy and ice cream are well discussed. The illustrations throughout the book will prove most helpful to the teacher.

M. P. H.

The Book of Green Vegetables. By Mollie Gold and Eleanor Gilbert. Pp. 180. Price $1.50. New York: D. Appleton & Co., 1928.

In addition to acquainting us with timely facts about green vegetables and methods of cooking and serving them, this little book offers a diversion in literary style to devotees of literature on foods and nutrition. The authors demurely state in the preface that they leave it to doctors and dietitians to point out the therapeutic value of greens; their endeavor is to present the virtues of these foods as pleasing edibles. They have done this with much credit to themselves as well as to the vegetables.

Pertinent points are presented regarding thirty-nine of the well known and less well known green vegetables; two hundred ways of serving them, suggestions on buying and hints on preparation for cooking are given.

L. G. G.

Everyday Foods. By Jessie W. Harris and Elisabeth V. Lacey. Pp. 512. Boston: Houghton Mifflin Company, 1927.

This book is written primarily for girls, from thirteen to seventeen years of age, in secondary schools. It covers a year's work in food study. There are two chief objectives: (1) It is written with the idea of making food study a science comparable to the other sciences. It is primarily a health and nutrition text and does not overemphasize cooking or the processes of production and the manufacture of foods. (2) The book is equally usable at home or at school.

M. P. H.

CURRENT LITERATURE

KATHLEEN M. LEWIS

American Journal of Diseases of Children

Vol. 36, November, 1928

*A comparison of cod liver oil and ultra violet light for use in the prevention of rickets. A. D. Holmes, E. T. Wyman, L. W. Smith and M. G. Pigott.—p. 952.

*Stimulation of growth of school children by small supplementary feedings. A. F. Morgan and L. Warren.—p. 972.

*Metabolism of undernourished children. C. C. Wang, M. Frank and M. Kaucher.—p. 979.

Allergy in an infant of three weeks. G. M. Lyon.—p. 1012.

Vol. 37, January, 1929

*The relation between malnutrition and nervousness. M. Seham and G. Seham.—p. 1.

Anemia of the new born infant. E. W. Ehrman.—p. 138.

A comparison of cod liver oil and ultra violet light for use in the prevention of rickets. In general, the results reported show that 5 mg. of the cod liver oil has sufficient antirachitic activity to protect laboratory animals against rickets when maintained under the conditions described. The results also indicate that 5 mg. of this oil gives greater protection than fifteen minutes of irradiation with ultra violet light at a distance of 36 inches, and that 5 mg. of cod liver oil also appears to be as effective as larger amounts when used as a protection against rickets.

Stimulation of growth of school children by small supplementary feedings. One hundred and seventy children from families of relatively low economic status were chosen for this experiment. About half of the children were 7 per cent or more underweight. All of the group fed on milk and crackers gained weight at about the same rate and the group fed on oranges somewhat less. The group fed on oranges, however, made better gains in height than the others. The girls in all groups and at all ages gained more in both weight and height than the boys. The addition of extra calories furnished a measurable advantage for these children.

Metabolism of undernourished children. In the study of ten normal and twenty-six undernourished children no differences were found in the power to absorb food material or in the caloric utilization of the two groups. The actual caloric utilization varies directly with the caloric intake.

The relation between malnutrition and nervousness. This clinical study of malnourished children shows that symptoms of nervousness and fatigue are more numerous in children whose weight-height index is more than 10 per cent below the standard, than in children whose weight-height index is less than 10 per cent below the normal. Forced feeding and rest reduces and improves nervous symptoms, and hastens the gain in weight.

American Journal of Hygiene

Vol. 8, November, 1928

Studies on the basal and resting metabolism after radiation with ultra violet light. E. Crofts.—p. 1014.

Vol. 9, January, 1929

*A study of the effect of various agents, chiefly sunlight, upon the susceptibility of rachitic rats to infection. E.C. Robertson.—p.75.

A study of the effect of various agents upon the susceptibility of rachitic rats to infection. Rachitic rats exposed to the sun for two hours daily for four weeks have an increased resistance to infection. The mercury vapor lamp improves resistance to infection but is not as effective as direct exposure to the sun. The feeding of appropriate amounts of irradiated ergosterol for four weeks to rachitic rats kept indoors, probably raises their resistance to infection. Cod-liver oil, however, does not have this effect.

American Journal of Physiology

Vol. 87, November, 1928

*The utilization of acetoacetic acid by normal and diabetic dogs before and after evisceration. I. J. Chaikoff and S. Soskin.—p. 58.

*Studies in the physiology of vitamins. C. J. Stucky, W. B. Rose and G. R. Cowgill.—p. 85.

*Effects of different food substances upon emptying of the gall bladder. W. F. Krause and L. R. Whitaker.—p. 172.

Vol. 87, January, 1929

*The alleged presence of carotin in pig's liver. L. S. Palmer.—p. 553.

*The metabolism and body temperature under basal conditions. F. R. Griffith, G. W. Pucher, K. A. Brownell, J. D. Klein and M. E. Carmer.—p. 602.

The utilization of acetoacetic acid in normal and diabetic dogs before and after evisceration. A series of experiments were tried on normal and diabetic dogs to determine at what rate acetoacetic acid was utilized. In normal and normal eviscerated dogs, the sodium acetoacetate disappears rapidly from the blood and it is therefore believed that the muscles are capable of utilizing the acetoacetic acid. In diabetic dogs the rate of disappearance was somewhat slower although in eviscerated diabetic dogs the disappearance was as rapid as in the normal dogs. The conclusion was drawn that the appearance of ketone bodies in excess amounts in the tissue fluids of the diabetic animal is not due to a deficiency in utilization but rather to the increased rate of production by the liver. The rate of utilization of acetoacetic acid is not affected by insulin.

Studies in the physiology of vitamins. Experiments were tried on apparently normal dogs to determine if the hypoglycemia reported as occuring in vitamin B deficiency was in any way related to disturbances in gastric motility and whether insulin injections could reestablish hunger contractions in vitamin B deficient dogs which had developed gastric atony. In the majority, a decrease in gastric motility developed when the dogs were kept on a vitamin B deficient diet. When insulin was injected into dogs showing a decrease in gastric motility, 25 per cent of ten dogs yielded an apparently positive response to the hormone, showing a definite improvement in motility of the stomach. This increase could not be attributed to the presence of vitamin B in the insulin. No direct relationship could be demonstrated between the blood sugar level and the gastric motility in these experiments.

Effects of different food substances upon emptying of the gall bladder. Fats and fatty acids are shown to be the most active foods in the emptying of the gall bladder, the unsaturated seeming more effective than the saturated. Pure carbohydrates are practically ineffective and pure proteins produce only a slight effect.

The alleged presence of carotin in pigs liver. Palmer gives experimental data which shows that the pigment in pigs liver resembling carotin, cannot be classed as such, and furthermore that it cannot be classed as carotinoid, a closely related substance.

The metabolism and body temperature under basal conditions. The authors present some very interesting experimental data and charts to show the variations of metabolism and temperature under a number of varying conditions. Both male and female subjects were used for these experiments, the women proving to be more variable than the men.

American Journal of Public Health

Vol. 28, November, 1928

*Porto Rico and its milk problems. P. M. Otero.—p. 1384.

*Diabetes in New York City. W. W. Peter.—p. 1388.

Vol. 28, December, 1928

Longevity of typhoid bacilli in cheddar cheese. E. M. Wade and L. Shere.—p. 1480.

*Bread and yeast.—p. 1509.

Vol. 29, January, 1929

*Chlorination as a factor of safety in shellfish production. W. F. Wells.—p. 72.

Porta Rico and its milk problems. The milk industry has improved remarkably in the last few years in Porto Rico due to enforcement of rules relating to sanitation, refrigeration and pasteurization. The per capita consumption is very low, the average of the whole island being only 30 grams daily. San Juan, the largest island has a per capita consumption of only ¼ quart daily.

Diabetes in New York City. In 29 years (1898–1926) the diabetes death rate has doubled in New York City while the death rate of other diseases has declined. Deaths from diabetes occur at the most economically productive ages. In the 29 years, 1296 deaths occurred among those under 25. Out of a total of 24,850 deaths, 23,554 took place among those past 25, more than half of these were between ages of 45–64.

Bread and yeast. Recent experiments have shown that the addition of two to four per cent of dried yeast adds materially to the nutritive value of bread.

Chlorination as a factor of safety in shellfish production. A commercial plant for the cleansing of muscles has been in successful operation in England since 1916; in New York state seven plants are in operation for the purpose of purifying the oyster and safeguarding this product. The system used consists of chlorinating the water, thereby lowering the bacterial count. Oysters treated in chlorinated water are safer than those from simply "approved ground." This treatment is of benefit to the shellfish industry because it offers greater security to public health.

American Medicine

Vol. 34, November, 1928 Food, Nutrition and Diet number

•Supplementary relations among nutritive values of foods. H. C. Sherman.—p. 767.
Accessory dietary essentials—vitamins. G. R. Cowgill.—p. 771.
The relation of vitamin B deficiency to infant mortality. B. Sure.—p. 781.
•Milk and medical science. J. A. Tobey.—p. 786.
The superiority of whole wheat bread. J. F. Lyman.—p. 794.
•Minerals and metabolism. E. Browning.—p. 803.
The importance of mineral constituents in diet. G. W. Clark.—p. 807.
•The acids of fruits. E. K. Nelson.—p. 812.
•Diet in health and disease. V. E. Levine.—p. 815.
The influence of nutrition on general health. E. E. Marcovici.—p. 826.
Sugar-saturated, vitamin-starved America. S. Harris.—p. 837.
The effect of the manner of eating on digestion. W. E. Fitch.—p. 844.
Aids to adequate infant feeding. C. V. Moore.—p. 852.
The use of concentrated foods in infant feeding. J. L. Rogatz.—p. 858.
Suggestions for simplifying infant feeding. W. A. McGee.—p. 964.
•Food allergy in infants. B. Ratner.—p. 868.
Malnutrition: its dietetic management. G. W. Kutscher.—p. 871.
The dietary factor in the treatment of tuberculosis. D. C. Martin.—p. 895.
Newer clinical knowledge pertaining to insulin. E. S. DuBray.—p. 904.

Supplementary relations among nutritive values of foods. Sherman stresses the importance of a quart of milk daily for every child until the age of fourteen. Suggestions on the proper food supplements are offered, from the economical as well as the nutritional standpoint.

Milk and medical science. Some interesting results from the use of milk in English schools; its importance in the normal and special types of diet are stressed.

Minerals and metabolism. A discussion of the interrelation of the mineral salts and vitamins in regard to nutrition. Calcium, phosphorus, magnesium, iron, sodium, potassium, copper and zinc are reviewed from the standpoint of their importance to human metabolism.

The acids of fruits. The principal acids in fruits are citric and malic acids, varying in different fruits and in different varieties of the same fruit. The degree of ripeness, climatic and soil conditions also vary the acidity. All fruit acids taken in moderate quantities are readily oxidized in the body.

Diet in health and disease. Levine stresses the clinical importance of the fact that a dietary prescription for any one person or group of persons must primarily include all the essentials of adequate nutrition. He includes an outline of the necessary nutritional factors for an adequate diet as well as a grouping of the mineral rich foods and vitamin rich foods.

Food allergy in infants. Clinical evidence shows that it has been definitely proved that mothers indulging excessively in certain foods during pregnancy will sensitize the child to that particular food.

Archives of Pediatrics

Vol. 45, November, 1928

*Mineral salt and water metabolism in infancy. P. S. Potter.—p. 633.
*Dried milk products. L. E. Persoff.—p. 681.

Vol. 45, December, 1928

Nephrosis. H. B. Silver.—p. 701.
*Basic feeding principles. P. S. Potter.—p. 708.
*The nutritive ratio of some modern foods. J. Zahorsky.—p. 730.
*Essential points in the dietetic management of infants. C. Sweet.—p. 740.

Mineral salt and water metabolism in infancy. The mineral salts are necessary for growth and assistance in carrying on the various functions of the body. They must be present in the body in proper relative proportions and in such forms as to be readily assimilated. The carbonates and phosphates have to do with the acid-base equilibrium of the body. The water needs of an infant are about three ounces per pound of body weight for the first 3 or 4 months. Sodium salts aid in the retention of water which is needed for the solution of certain parts of the food, and for the suspension of other parts and also for the rapid elimination of waste.

Dried milk products. The most striking development in infant feeding has been the introduction and increasing use of dried milk products instead of fresh cow's milk. Dried milk products have been very successful because of their low bacterial content, convenience of use and increased digestibility. The two current processes of drying are described.

Basic feeding principles. The basic principles in infant feeding are listed thus: Calories, 45 per lb. of body weight per day for first year; Fat, 1.8 gms., carbohydrate, 3–8 gms., and protein 1.5 gms. Fluid content should be 30 oz. per lb. of body weight. However, as infants differ, each may need a different formula. Artificial feeding introduces still another problem, to use it wisely one must know the methods used in making artificial foods. These are listed and explained.

The nutritive ratio of some modern foods. The nutritive ratios of the protein to the non-protein elements are expressed mathematically. Zahorsky gives his calculations of human as well as modified milk.

Essential points in the dietetic management of infants. The problem of feeding the infant from birth to three years is discussed. Breast milk should be given the baby at first, if possible, and supplemented by orange juice and cod liver oil when needed. A variety of foods containing some cellulose should be introduced at an early age. All foods should be served separately. Never try to force the child to eat, but endeavor to place the entire responsibility of eating upon the child.

Hospital Management

Vol. 26, November 15, 1928

Scientific diets prepared by Near East Relief despite difficulties. W. Post.—p. 54.
Do you charge for visitor's trays?—p. 68.

Vol. 26, December, 15 1928

Dietitians to put more stress on food service.—p. 42.
Inter-departmental problems in diet.—p. 68.
Central service effects economies.—p. 70.

Vol. 27, January 15, 1928

*Correlated diets make for cheaper and better food service. A. E. Boller.—p. 54.

Correlated diets make for cheaper and better food service. It has been found that one-third of the hospital budget is expended in the dietary department and that two-thirds of this amount is spent for food. The correlated menu has been suggested as a means of economy in menu planning.

Journal of American Medical Association

Vol. 91, November 10, 1928

*Vitamins in the etiology and cure of gastric and duodenal ulcers. S. Harris.—p. 1452.
*Treatment of severe dibothriocephalus latus anemia. O. Richter, S. Maurer, and M. Eyl.—p. 1462.
The fuel for human power.—p. 1464.

Vol. 91, November 24, 1928

*Food allergy. A. H. Rowe.—p. 1623.

Vol. 91, December 1, 1928

*Treatment of pernicious anemia. R. Isaacs, C. C Sturgis, and M. Smith.—p. 1687.

*Some new features of the study of vitamins.—p. 1720.
Iodide and health.—p. 1720.

Vol. 91, December 22, 1928

*Cod liver oil as a substitute for cream in feeding mixtures for infants. H. E. Irish.—p. 1884.

Vol. 91, December 22, 1928

*The treatment of nephritis and nephrosis with edema. E. G. Bannick and N. M. Keith.—p. 1944.
*Tuberculosis enterocolitis. F. Smithies, M. Weisman, and F. Fremmel.—p. 1952.
*Vitamin B synthesis in the cow and the quality of milk.—p. 1997.
*Diet and the contraction of the gallbladder.—p. 1999.

Vol. 91, December 29, 1928

*Colitis—the spastic type. E. L. Eggleston.—p. 2049.
*Studies in rickets. T. K. Selkirk, J. V. Greenbaum, and A. G. Mitchell.—p. 2057.
The nature of pepsin.—p. 2069.

Vol. 92, January 5, 1929

*Diabetes mellitus in twins. A. H. Bunce.—p. 52.
*The experimental production of food poisoning.—p. 56.
*Nutrition and longevity.—p. 57.

Vol. 92, January 12, 1929

*Diabetic children. E. P. Joslin and P. White.—p. 142.

Vol. 92, January 19, 1929

*Antirachitic potency in relation to volume of oil in the liver of the cod. A F. Hess, C. E. Bills and E. M. Honeywell.—p. 226.
Molecular weight of proteins.—p. 233.

Vol. 92, January 26, 1929

Specific treatment of amebic dysentery. O. W. Bethea—p. 310.
Primary anemias in infancy.—p. 316.

Vitamins in the etiology and cure of gastric and duodenal ulcers. McCarrison states that primitive people did not have ulcers, due to the fact that they used natural foods. Classic experiments seem to prove that foods of low vitamin value, if used over a long period, predispose to infections of the gastro-intestinal tract. The importance of the vitamins in ulcer diets is emphatically stressed—a fact hitherto neglected in the diets of Sippy and Lenhartz. A diet, covering a six weeks treatment, is included in the article.

Treatment of severe dibothriocephalus latus anemia. A high calorie diet, rich in vitamins and liver extract, and consisting chiefly of orange juice milk, and cream mixture, wheat germ extract and liquid extract of liver is advocated on such a diet; the hemoglobin increased sixty-eight points in three weeks. Anti-syphilitic treatment should not be started until after the hemoglobin is increased.

Food allergy. A valuable discussion of food allergy, with tables of elimination diets for use in the treatment of patients who have definite food idiosyncrasies. Skin sensitivity tests are most important, to be followed by proper diet.

The treatment of pernicious anemia. For the average patient without complications the diet should contain half a pound of liver daily, together with a liberal allowance of meat, eggs, green vegetables and fresh fruits, especially peaches, apricots and strawberries. The active principle of liver is soluble, so that any liquid used in cooking should be utilized.

Some new features of the study of vitamins. Vitamin B has recently been dissembled into vitamins F and G, B^1 and B^2. B^1 or F, is the antineuritic factor, and G or B^2, the antipellagric factor. Yeast contains both; corn appears rich in F and poor in G; milk shows the reverse, being poor in F and rich in G.

Cod liver oil as a substitute for cream in feeding mixtures for infants. In infant formulas skimmed milk was supplemented with cod liver oil instead of cream to bring the fat to the required level. It was well taken by all children under 10 months and the results were good clinically.

Treatment of nephritis and nephrosis with edema. The essentials of the diet for nephritis are food and fluid starvation. Salt should be limited to 3 grams daily, protein to 40 grams, and water to 1200 cc. with calories just meeting the usual basal caloric requirements. In chronic nephrosis the diet should be high in protein and low in fat.

Tuberculosis enterocolitis. The diet should have low caloric value with high fluid and vitamin content and should consist of foods with little residue. No raw milk should be permitted since it tends to form hard curds and also because it is a good medium for bacterial growth.

Vitamin B synthesis in the cow and the quality of milk. The vitamin B complex can be produced in the rumen of a cow by bacterial fermentation, thus explaining the reason for the yield of milk of normal dietary composition from the cow while on a ration that carries an insufficient amount of vitamin B.

Diet and the contraction of the gall bladder. In a case of gall stones a diet low in fat should be given because of the fact that fat is the most effective food in causing contractions of the gall bladder.

Colitis—the spastic type. Eggleston's experience leads him to advise avoiding all bulky foods in spastic colitis, that is, in the acute stage of the disease. He recommends also the use of acidophilus buttermilk and lactose in certain cases where it may be necessary to change the intestinal flora.

Studies in rickets. A small amount of ultra violet irradiation from an efficient artificial source is a practicable method of preventing rickets in the human infant if treatment is started early and given regularly.

Diabetes Mellitus in twins. Diabetes mellitus appears to develop in twins simultaneously and runs the same clinical course. Occurrence of the disease in identical twins would seem to indicate some inborn or hereditary constitutional factor, while development in one twin and not the other indicates some other etiologic factor.

Experimental food poisoning. A series of experiments with mice, fed on heated whole fluid cultures is given. Positive results have been received by this method of inducing food poisoning.

Nutrition and longevity. Experiments were made with rats, since the chemistry and physiology of human and rat nutrition are sufficiently similar. A recent study of 400 rats proved that superior longevity can be induced by the improvement of an already adequate diet.

Diabetic children. For 22 months, ending July 1, 1928, the total mortality among 303 diabetic children has been six, or one per cent a year. In the six year period between August 1922 and July 1928, the total mortality was 36 or two per cent for 357 children. Obesity should be avoided by relatives of diabetic children as middle age approaches, since diabetes is largely hereditary among children. Coma is almost the only cause of death and this is due to neglect. Cataracts exist among 298 living diabetic children. Diabetic children resist all types of infection if proper adjustments of diet and insulin are made.

Antirachitic potency in relation to volume of oil in the liver of the cod. Oil from "poor" livers, that is, those giving small amounts of oils and formerly considered inferior to livers producing large quantities, was found by the authors to be 200 times more potent than so-called high grade cod liver oil. Oil from the liver of individual cods may vary 1,000 times in antirachitic value.

Journal of Biological Chemistry

Vol. 80, November, 1928

A new process for the separation of the vitamin fraction from cod liver oil.—J. K. Marcus.—p. 9.
Antiricketic substances. C. E. Bills and E. M. Honeywell.—p. 15.
*Lactose metabolism in women. O. Watkins.—p. 33.
An inheritance study of the distribution of vitamin A in maize. S. M. Hauge and J. F. Trost.—p. 107.
*Feeding experiments with a diet low in tryosine. H. D. Lightbody and M. B. Kenyon.—p. 149.
*Experiments on the nutritive properties of gelatin. R. W. Jackson, B. E. Sommer, and W. C. Rose.—p. 167.
*Studies in the composition of human milk. M. Bell.—p. 239.

Vol. 80, December, 1928

The destruction of vitamin E in a ration composed of natural and varied foodstuffs. J. Waddell and H. Steenbock.—p. 431.

*Studies on the metabolism of Eskimos. P. Heinbecker.—p. 461.

The effect of scruvy-producing diets and tyramine on the blood of guinea pigs. M. T. Hauke and K. K. Koessler.—p. 499.

*The manganese-copper-iron complex as a factor in hemoglobin building. R. W. Titus, H. W. Cave and J. S. Hughes.—p. 565.

*A comparison of the thresholds of ketosis in diabetes, eiplepsy and obesity. W. McClellan, H. J. Spencer, E. A. Falk and E. F. DuBois.—p. 639.

Bile salt metabolism—influence of meat and meat extractives, liver and kidney, egg yolk and yeast in the diet. H. P. Smith and G. H. Whipple.—p. 671.

Vol. 81, January, 1929

*The mineral constituents of cranberries. F. W. Morse.—p. 77.

Is there a relationship between the spleen and calcium metabolism? F. P. Underhill and E. G. Gross.—p. 163.

Lactose metabolism in women. Watkins shows that during the last stages of pregnancy there is a constant excretion of small amounts of lactose which increases until a few days before delivery, when there appears a marked rise in lactose excretion. By the end of the first month after delivery the lactose excretion has assumed a constant and lower level. The normal lactose tolerance is about 10 grams; this increases during menstruation to 20 grams without signs of any urinary response to the increased ingestion.

Feeding experiments with a diet low in tyrosine. The growth of rats, for a period of twelve weeks, was shown to be independent of the tyrosine content of the food.

Experiments on the nutritive properties of gelatin. Results indicate that gelatin as the sole protein is not a suitable source of nitrogen, even when supplemented with the amino acids known to be missing. "Evidently, the peculiar inadequacies of this material for growth purposes are not to be ascribed to the presence in the molecule of linkages which cannot be severed by the digestive mechanism."

Studies in the composition of human milk. The reports of analyses of the breast milk of 88 normal women are presented. The average figures for ash and protein decreased, and those for lactose and fat increased from the fifth to the ninth day. Supplementary feeding of carbohydrate and of fat made only slight differences in the composition of the early milk. The average volumes secreted were greater after supplementary feeding of carbohydrate and less after fat feeding.

Studies on the metabolism of Eskimos. A brief account of the diet of Polar and Baffin Island Eskimos is given. By means of glucose tolerance curves it is shown that these people have a high carbohydrate tolerance. The NPN of the blood of Eskimos is similar to that of other races, these results indicating no retention of nitrogenous products in the blood from the habitual high protein diets. The Eskimo seems to show a remarkable power to oxidize fats completely. The basal metabolism of these people is considerably higher than that of persons living in the temperate zones.

Manganese-copper-iron complex as a factor in hemoglobin building. Manganese added to a milk-iron diet gives almost as good results as copper in the building of hemoglobin. Manganese and copper together produce a quicker response than does either alone. Experimental data seems to indicate the existence of a group of substances, rather than a single substance which is active in hemoglobin building.

A comparison of the thresholds of ketosis in diabetes, epilepsy and obesity. Observations were made on six men, all taking high ketogenic diets. The threshold of ketosis was approximately 1.5 except for the obese man whose threshold was about 2.4. The authors assume this difference is due to the fact that the obese man has developed a greater efficiency in the utilization of fat than has the normal individual.

The mineral constituents of cranberries. In comparison with other fruits cranberries

have relatively little ash, the orange being from 1.15 per cent to 0.21 per cent. Cranberries are comparatively high in manganese, however. The average alkalinity is 2.2.

Journal of Home Economics

Vol. 20, November, 1928

Home economics in Great Britain. H. Reynard—p. 775.

*Visualizing food values. M. S. Rose, M. C. Hessler, H. K. Steibeling, and C. M. Taylor.—p. 781.

The consumer and standardization in food products. C. B. Sherman.—p. 801.

*The adequacy of some New Zealand dietaries. L. B. Stonus and E. N. Todhunter.—p. 817.

Vol. 20, December, 1928

The variability in vitamin content of human milks. I. G. Macy, J. Outhouse and H. Hunscher.—p. 897.

Vol. 21, January, 1929

Diet and exercise in the control of weight. H. T. Barto.—p. 21.

A nutrition exhibit. E. R. Maclay.—p. 27.

*Waste in oranges as affected by size and method of preparation. N. Browning and M. S. Pittman.—p. 45.

The influence of the amount of food consumed on the growth of an animal. M. C. House.—p. 51.

Visualizing food values. A simple and effective method of calculating a dietary by the "share" method. "Shares" are the measures of relative values which can be readily converted into the conventional calories or grams.

The adequacy of some New Zealand dietaries. The study of food consumed by 12 New Zealand families shows: that all diets but one met the energy requirement; that in all the diets the protein was sufficient; that the high proportions of calories were derived from sugar and fats; that calcium, phosphorus and iron were low. The low mineral salts and high sugar content of these diets doubtless have a direct bearing on the poor teeth of New Zealanders.

Waste in oranges. In a study of large, medium and small California navel oranges, the medium sized ones proved to be the most economical in that they yielded the smallest amount of waste. In every method of preparation large oranges showed a greater amount of waste.

The Journal of Nutrition

Vol. 1, September, 1928

The effect of inadequate vitamin B upon sexual physiology in the male. H. M. Evans.—p. 1.

*Relation of vitamin E to growth and vigor. H. M. Evans.—p. 23.

*Growth and reproduction on white bread with various supplements. M. S. Rose and G. MacLeod.—p. 29.

The distribution of vitamin E. N. Simmonds, J. E. Becker and E. V. McCollum.—p. 39.

A detailed study of the rôle of vitamin B in anorexia in the albino rat. B. Sure.—p. 49.

*The character of the energy metabolism during work. M. E. Marsh.—p. 57.

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*Muscular efficiency on high carbohydrate and high fat diets. M. E. Marsh and J. R. Murlin.—p. 105.

*Vitamin requirements for nursing young. B. Sure.—p. 139.

*Some factors affecting the connective tissue content of beef muscle. H. H. Mitchell, T. S. Hamilton and W. T. Haines.—p. 165.

Nutritional significance of our present knowledge of the multiple nature of vitamin B. H. C. Sherman.—p. 191.

Relation of vitamin E to growth and vigor. Evans points out evidences to show the improved growth in animals receiving vitamin E. Sterility was corrected in one-fourth of the animals treated. The author gives some interesting charts of growth curves.

Growth and reproduction on white bread with various supplements. Results of feeding different percentages of bread, supplemented with egg, milk, carrots, spinach, almonds and lean beef are given. The poorest results were made with bread and lean beef; the best results were made with a diet consisting of 70 per cent bread and 30 per cent milk and also with a diet of 70 per cent bread and 30 per cent egg.

The character of energy metabolism during work. A group of experiments on seventeen subjects, chiefly with a group of three—two boys aged 14 and 15 and one an athlete 21 years of age, are reported. The average excess R. Q. with both boys on an uncontrolled diet was 0.78. With the older subject who was on a high carbohydrate and high fat

diet the excess R. Q. was 0.95. On the high fat diet the recovery to the pre-work level of O_2 absorption and CO_2 elimination was slower than on the high carbohydrate diet. The higher R. Q. of work metabolism with the high fat diet is explained by the presence of acidosis. The conclusion was, "that the body uses for the energy of muscular work both carbohydrate and fat."

Muscular efficiency on high carbohydrate and high fat diets. The high carbohydrate diet used for the 47 experiments on a single subject for the determination of muscular efficiency contained 2400 calories daily, 80 per cent of which came from carbohydrate and approximately 12 and 8 per cent respectively from fat and protein. The high fat diet contained 2800 calories of which 80 per cent came from fat and approximately 12 and 8 per cent respectively from carbohydrate and protein. The average efficiency on the normal diet at the rate of 1.4 calories of work per minute was 22.1 per cent; on high carbohydrate diet at the same caloric rate, 22.7 per cent; on high fat at the same caloric rate, 21.5 per cent. On the high carbohydrate diet there was no change in the efficiency, but on the high fat diet the efficiency progressively declined from the 3rd and 4th day of the diet, to the 7th day.

Vitamin requirements of nursing young. A study of the determination of the vitamin B unit, which is defined as the daily amount of vitamin B that must become available to a nursing young albino rat weighing 30 grams in order to permit a gain of 10 grams in 7 to 10 days. The average minimum daily dosage of vitamin B was found to be 15.8 mg. Sure also points out that the nursing young need approximately 100 times as much vitamin B as vitamins A and D to insure continuous growth during the nursing period.

Some factors affecting the connective tissue content of beef muscle. The effect that age and the quantity of collagen and elastin in animal tissue has, upon the quality and palatability of meat is fully discussed. These are only a few of the results of a national cooperative project among the state agricultural experiment stations and the United States Department of Agriculture, who have been concerned for a number of years with the production of more desirable kinds of meat.

Modern Hospital

Vol. 31, December, 1928

*Christmas, the day of days for the hospital dietitian.—p. 126.
Small electric oven has many desirable features.—p. 146.

Vol. 32, January, 1929

*Bringing the banana to perfection for hospital patients. A. Lautz.—p. 132.

Christmas—the day of days for the hospital dietitian. Many suggestions and clever ideas that could be used to brighten Christmas day for hospital patients are given in detail.

Bringing the banana to perfection for hospital patients. The advantages of using bananas depends upon their proper care and their use while in the best state of nutritive value, digestibility and palatability. Bananas should be hung in a well-ventilated room at an even, cool, living-room temperature; they should not be chilled until skins grow dark and fleck with brown.

Western Hospital and Nurses Review Combined with Food Facts

Vol. 12, November, 1928

Malnutrition. E. R. Cox.—p. 15.
*Federal inspection of meats, J. R. Mohler.—p. 18,
*The use of normal diets in the treatment of diabetes. W. D. Sansum, P. A. Gray and R. Bowden.—p. 21.
*The relative cost of nutrients in vegetable foods. H. B. Thompson, L. Feeley and E. T. Fillmore.—p. 27.

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*The use of normal diets in the treatment of diabetes. W. D. Sansum, P. A. Gray and R. Bowden.—p. 21.
Research in back of yeast for health. C. A. Smith.—p. 23.
*Newer canned vegetables. E. I. Harrington.—p. 32.

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*The influence of diet on teeth. A. F. Morgan.—p. 19.

*The use of normal diets in the treatment of diabetes. W. D. Sansum, P. A. Gray and R. Bowden.—p. 27.

The calavo in the diet. L. S. Weatherby.—p. 31. Salmon as a valuable food.—p. 35.

Federal inspection of meats. The value of meat depends, to a great extent, upon the source of supply and methods of handling. To be assured of wholesome meat one must be familiar with the conditions under which it is prepared and distributed. This article summarizes the methods used in the federal inspection of meat and animal products.

The use of normal diets in the treatment of diabetes. This is the second of a series that Sansum has published on the cause and treatment of the diabetic type of acidosis. Treatment for acidosis is immediately begun by giving insulin, 40 or 50 units hourly, half-hourly, or quarter-hourly. This treatment has also been used by Joslin.

The relative cost of nutrients in vegetable foods. The comparative costs of vegetables in relation to the waste entailed in their preparation for consumption is discussed. Some interesting charts accompany the article.

The use of normal diets in the treatment of diabetes. The routine treatment of diabetes is outlined; four aims are evident: 1—To keep the patient free from acidosis; 2—To nourish the patient adequately; 3—To free the patient and keep him free of sugar; 4—To maintain the patient's blood sugar at a normal level.

The newer canned vegetables. This article brings to light a new process of canning vegetables in the pureèd form, for use especially in child feeding, that retains all the properties of fresh vegetables. The process is now used commercially in canning spinach, asparagus, carrots, celery, beets, tomatoes and peas.

The influence of diet on teeth. It is now generally taught that a healthy condition of the teeth is largely dependent upon good nutrition, and that local mouth conditions are secondary in importance in producing or preventing caries or pyorrhea. Many experiments dealing with the teeth of various types of animals have been carried on, and at present a rather extensive series of experiments upon this general subject is now under way. It is clear that much remains to be discovered as to the true relation between the acid-base equilibrium of the diet and of the animal body, and the development of normal bones and teeth.

The use of normal diets in the treatment of diabetes. The fourth of the series by this group of authors outlines the treatment of mild cases of diabetes. The patients are taught, so far as possible, to take care of themselves in their homes, although hospitalization at first, for the purposes of educating the patient, is desirable.

NEWS NOTES

The Executive Committee of the American Dietetic Association met in Chicago, December 3, 1928. The members present were the President, Anna E. Boller, Martha Koehne, Thelma Tubbs, Mrs. Thoma, Lenna Cooper, Ruth Cooley and Clyde Schuman. The JOURNAL editor and the business manager were also in attendance.

In discussing the place and date of meeting for the 1929 Convention the possibility of a joint meeting with the American Hospital Association, from whom an invitation had been received, was considered. The consensus of opinion was that while such a joint meeting had many favorable aspects it would not be feasible at present as we would have to forego the Commercial Exhibit, an important source of interest and revenue. Since the American Hospital Association meets in June, Mrs. Huddleson felt that such a decided change in the date of the annual meeting should be taken up with the membership as a whole before a decision as to any future joint meeting could be made.

The members felt it was essential that we meet in a city with an active, well-organized and enthusiastic local group in order to insure a successful meeting. Minneapolis and Detroit were discussed favorably. The Committee finally voted to hold the twelfth annual meeting at Detroit, during the first two weeks of October, 1929.

The following three members of the Advisory Committee were elected: Dr. MacEachern of the American College of Surgeons, Miss Carrie Hall of the National League of Nursing Education and Miss Theresa Clow.

The following members of the JOURNAL Board were chosen by Miss Boller, after consultation with the editor, and their appointment was approved by the Executive Committee: Ruth Wheeler, Florence H. Smith, Mary deGarmo Bryan, Marjorie Copher, Kate Daum and Margaret Gillam.

The Treasurer of the Association was authorized to investigate the matter of insuring and efficiently handling money received at conventions.

The question of state, local and district affiliations was discussed. Dr. Koehne was appointed to work on this problem and also to formulate plans and suggestions to be brought to the attention of the Revision Committee.

Miss Tubbs was appointed to head a special committee for the purpose of stimulating interest in life memberships. The dues are to be increased from $50 to $75, beginning October 30, 1929.

The Committee approved the appropriation of $120 a month rent for increased central office space; $225 for additional office furniture including a typewriter; an additional typist at $18 a week, and that Mrs. Richmond's salary be increased from $165 to $175 per month. It was decided that Mrs. Richmond should be responsible for the commercial exhibits and JOURNAL advertising, with the assistance, advice and approval of a special committee to be appointed by the President. It was voted that this committee be a permanent one which would correspond to the Bureau of Investigation of the American Medical Association. The President read an excerpt from a widely circulated booklet of dietetic quackery, illustrating the need of action on the part of the Association with a view to discouraging pseudo-scientific propaganda.

In discussing the Placement Bureau, it was felt that local groups should be encouraged to coöperate with the Chicago office. The maintenance of the central Placement Bureau entails considerable expense; it is therefore impracticable to coöperate with local placement bureaus unless they lend financial support.

According to the Constitution, it is neces-

sary to have seven members of the Executive Committee in attendance at meetings as a quorum. Since this is sometimes difficult, it was proposed and favorably acted upon that an addition be made to the by-laws legalizing voting of Executive Committee members by mail when necessary.

With reference to future Convention publicity, it was decided that the JOURNAL editor should secure, and censor in advance of the meeting, abstracts of speakers' papers. This material would then be turned over to an assistant editor who would interview reporters during the Convention, leaving the publicity chairman free to handle daily bulletins and other details.

The matter of convention registration was then discussed. It was agreed to continue the registration fee of $2.00. The Secretary of the Association was asked to devise some means for insuring that all members who attend the annual meetings pay this registration fee.

It was decided that unless members' dues were paid on or immediately following the date of the annual meeting, subscription to the JOURNAL would cease with the September issue. A notice to this effect will be included hereafter in that issue of the JOURNAL.

The possibility of further development in section organization, with section members electing a president, secretary and treasurer, the president to retire after one year, the secretary taking her place and the treasurer in turn taking the secretary's, was discussed. This plan would simply call for the election of a new treasurer each year. There was some opposition to the plan, namely—the possibility that such a system might result in a lack of harmony with individual section policies and those of the organization as a whole, and that such an advanced system of section organization was more suited to large organizations than ours.

It was suggested that at present the members find it difficult to limit their interests to any one section, since the average dietitian is concerned with problems of administration, diet therapy, education and social service. It was finally decided that the Administrative Section try a proposed plan of more advanced section organization during the coming year, with the suggestion that other sections follow if it seems practicable.

It was proposed that, instead of a Special Interests Luncheon or Dinner (which has sometimes proved unwieldy at past conventions), four Section dinners (Administration, Diet Therapy etc.) be held in separate rooms with the chairman in each case planning the program. Dr. Koehne suggested that the annual banquet be held on Tuesday instead of Monday, in order to give the local group time to make plans. Special attention should be given in planning the Monday afternoon program in order to insure good attendance on the first day.

The following outlines of section activities were proposed for the coming year:

Section on Education

1. Continue work on re-organization of courses for student nurses, Mary Northrup, sub-chairman.
2. Continue work on suggestive outline for college courses for students entering the field of nutrition, Martha Koehne, Sub-chairman.
3. Continue and promote growth of permanent non-commercial exhibit, Sarah Elkin, sub-chairman.
4. Establish a card index of hospital course for student dietitians, to contain all accepted course, with data of accrediting, dietitian in charge, length of course, number of students, other concise available data. Record changes in dietitians' appointments and reacceptance of course under new dietitian.
   A. Make survey of rejected or accepted hospitals to find out length of courses given. Lay ground work for uniform length of course. (Acceptance now includes 6–8–9–10–12–month courses.)
   B. Send routine cards to check up on changes in dietetic personnel.
5. Appoint committee to work upon an up-to-date Nutrition Bibliography to be published as a suggestion for dietary department libraries in hospitals.

6. Send out form letters to all medical schools for information regarding course in nutrition given to medical students. Ascertain by whom this instruction is given.
7. Appoint a joint committee composed of members in Canada and the United States to make a comparison of the courses of nutrition offered to students in colleges in the United States and Canada.
8. Attempt to work out an affiliation for hospitals which cannot be approved because of insufficient working material for student dietitians.
9. Investigate the question of national registration of dietitians.
10. Formulate plans for the inspection of Hospital Courses for Student Dietitians.

RUTH M. COOLEY, *Chairman,*
Educational Section, American Dietetic Association.

Section on Social Service

I. A study of the past work of the section indicates that:
   a. The work has been centered primarily around nutrition in out-patient departments of hospital.
   b. The choice of a name for the section that will be satisfying to all to replace the present name may be a need.
   c. The study of the purpose of the section should be given careful consideration.
   d. The study of and planning of a program of work for the section that will be possible of accomplishment and at the same time contribute to the future work of the section should be undertaken.
   e. An effort should be made to find out those in the association who are especially interested and who desire to work in the section. Members interested are urged to communicate with Miss Schuman.

II. A brief discussion of possible activities for the section with the president of the association and other members interested seems to indicate the wisdom of undertaking some of the following activities:
   a. Outlining the different types of work represented in the section, listing the chief problems of the group and studying a few of the common problems.
   b. Making an effort to provide, secure and circulate information regarding the work of hospital dietitians, out-patient departments and other groups teaching nutrition.
   c. Making an effort to establish contacts with other groups and organizations in order to coöperate with and supplement previously started programs and projects rather than over-lap and duplicate them.
   d. Studying the method of having nutrition work in the community carried as a part of the community program through public authorities.
   e. Studying the number of Public Health dietitians in the United States at a given time, 1929–30, where employed, duties and average salary paid.
   f. Studying carefully in given communities or sections the methods of interpreting nutrition to the home and community at large with a summary of results.
   g. Studying the training of dietitians in the social service field, the opportunities offered them for community experience and the methods of work.
   h. Studying material available for individuals engaged in work represented by the Social Service Section, and circulating information on this through the JOURNAL.
   i. Preparing a Nutrition Bibliography.
   j. Presenting information showing ways and means of interpreting nutrition to the home and the community.
   k. Preparing adapable nutrition records.
   l. Securing information on the number of hospitals and the names of those

giving assistance to patients through nutrition education while patients are in the hospital. Studying methods employed, subject matter and system established for follow-up on these patients.

m. Studying special phases of nutrition work, such as pre-school program, industrial program, adult program through the home and industry in towns. cities etc.

n. Studying work of other groups such as hotels, restaurants, cafeterias, school lunch rooms, extension service of U. S. Department of Agriculture, Nutrition Service of State Municipal Departments, Nutrition Service of the American Red Cross, nutrition work in the A. I. C. P., V. N. A.'s, Associated Charities, Health Centers, Nursery Schools and other groups; giving reports of this work that would be of interest to the section through the JOURNAL and other magazines.

o. Studying contributions made in nutrition by dietitians to the American Red Cross through the chapters in time of disaster. Offering assistance through members of the American Dietetic Association to the American Red Cross Nutrition Service in disaster, should such assistance be needed.

CLYDE B. SCHUMAN, *Chairman,*
American Red Cross,
Washington, D. C.

Section on Administration

During the recent annual meeting of the American Dietetic Association certain criticisms were directed toward the administrative dietitian. It would therefore seem to be appropriate for the Administration Section during the coming year to investigate conditions leading to these criticisms, and to take steps to strengthen the administrative dietition's position both through improved training for this type of work, and through suitable publicity for those who are especially well qualified to meet the exacting demands of such a position. Therefore, the objectives of this section for the coming year are: First, to stimulate interest in administration and to raise the standards of dietetic work in administrative fields; second, to promote the interests of the administrative dietitian by bringing her in closer contact with opportunities in this field; third, to be a source of information and to render assistance to the Placement Bureau and to the organizations or individuals seeking trained and especially qualified dietitians; fourth, to make contacts and coöperate with national associations in allied fields and to provide representation at their meetings; fifth, to prepare and distribute a bibliography of the current literature on Dietary Administration and allied fields to members of the Association interested.

In order to carry out the above program, it seems necessary to have an enrolled membership with special dues for this section, the dues to be $2.00 the first year, $1.00 of which is for registration with the Placement Bureau. The qualifications for membership in this section are as follows:

A. Three years successful experience as the manager of a dietary department in a hospital of not less than 150 beds; or as manager of a special-diet department in a hospital of not less than 250 beds.

B. Three years successful experience as the manager of a restaurant, a tea room, a cafeteria or a dormitory. Any of these positions must have provided experience equivalent to that received by the dietitian in the above specified hospitals.

C. Instructors of institutional administration with three years successful experience, some of which has been gained in some of the above specified fields.

It is believed that the statement that there are few competent administrative dietitians is untrue; this impression has been created possibly because there is no organization through which the more highly qualified members of the profession are made known to those seeking their services. It is also

believed that publicity, resulting in the development of new opportunities for those already satisfactorily placed will prove a stimulus and a benefit both financially and professionally to the trained administrator.

(Signed) LENNA F. COOPER, *Chairman,*
Food Director, University of Michigan, Ann Arbor.

The Second Annual Meeting of the Midwest Dietitians, sponsored by the Chicago Dietetic Association was held in Chicago, January 18 and 19, 1929. Approximately 150 attended each session and registration showed there were representatives from Illinois, Indiana, Michigan, Wisconsin and Missouri.

The first meeting was held on Friday afternoon, January 18, at the Ida Noyes Theatre, University of Chicago, Mrs. Esther Ackerson Fischer presiding. Dr. Carlson, Director of Department of Physiology, University of Chicago, spoke on "Recent Studies of the Hunger and Thirst Mechanism." Man seems to have no mechanism for becoming aware of his most vital needs, for instance, oxygen and certain minerals; perhaps because under ordinary circumstances oxygen exhaustion means increase of carbon dioxid in the air he breathes, which in turn causes pain in the chest and heart, making him conscious of his need; and in normal circumstances there is an adequate supply of necessary minerals. It is believed that the violent contractions of an empty stomach give rise to the feeling of hunger—but it has been shown that the behavior of the stomach is as regular as that of the heart. In certain abnormal conditions, such as disease or fever, the contractions of the stomach do not cause hunger, but sometimes cause nausea: therefore the sensation of hunger must depend on a certain normal condition of the sensory nerves. The most widely accepted theory in regard to the sensation of thirst is that it is caused by drying of the mucous membrane of the mouth and throat, or decrease of salivary secretion. Dr. Carlson feels that this theory is disproved because thirst often occurs before there is dryness of mucous membrane, and in dogs with salivary glands entirely removed there is no more thirst apparent than in normal animals. Another theory is that thirst is caused by contraction of the oesophagus, but it can be questioned as to whether this is cause or result. It has been shown that thirst can be wholly done away with for a time if the body is immersed in a tub of warm water, and moderate thirst can be done away with by complete relaxation of the body.

Dr. Lydia Roberts, of the Home Economics Department, University of Chicago, well known for her extensive work in nutrition, spoke on "The Dietitian and Normal Nutrition." Dietitians sometimes devote their time to abnormal nutrition to the neglect of nutrition for normal individuals, and in planning therapeutic diets neglect to consider normal requirements. Nutrition workers are often too dogmatic in their ideas of diet, and think only in terms of the conventional American diet. The only method of judging the adequacy of a diet is by analysis, and comparison with the known requirements of protein, calories, minerals, vitamins and bulk. She demonstrated by charts that the simple and limited diets of other races and nationalities often more adequately fill requirements than the average American diet.

Mrs. Callie Mae Coons, graduate student in the Department of Home Economics, University of Chicago, gave a preliminary report on a study of "Calcium Retention in Pregnant Women." This is part of a study being carried on by graduate students in the Department of Home Economics under Dr. Blunt, to determine the storage of minerals in pregnant women at different periods. Mrs. Coon's study has extended over several years, during which time some of the same subjects have come under observation more than once. The women studied were on diets chosen and prepared by themselves with all foods and excreta weighed and analysed. In four cases studied the women did not store excess calcium, and even fell below the standards set by Schmitz. No conclusions have as yet been drawn from the incomplete study, but it is believed it may have something to do with destruction of tooth structure, inability to nurse child and other conditions.

Miss Amalia Lautz, graduate student of the Home Economics Department, University of Chicago, gave a report of "Nutrition Work in Germany." She made a three months' study of nutrition of mothers and children in an institution where the mothers came when pregnant and remained until the child was of school age. The institution was under the auspices of the German Red Cross. Miss Lautz felt that although the ideas on nutrition held by directors of the Red Cross were sound, the funds, staff and equipment were so woefully inadequate that there was not a great deal that could be done. There are not many trained nutrition workers in Germany, but there is great general interest in nutrition work, which needs organization and direction. Following this meeting those who attended were guests at a tea given by the University in the beautiful reception room of Ida Noyes Hall. At 5:00 p.m., the group was invited to attend the regular organ recital in the new University Chapel.

The meeting in the evening was at a dinner held in the Club Rooms of the Medical and Dental Arts Building with Dr. Morris Fishbein, Editor of the *Journal of the American Medical Association*, as principle speaker and Mrs. Fisher, presiding. Greetings were extended to the Midwest Dietitians by Dr. Katherine Blunt, Head of the Home Economics Department, University of Chicago, Miss Ann Boller, president of the American Dietetics Association, and Miss Winkleman, Head of the Home Economics Department of Lewis Institute. Dr. Fishbein's topic was "Food Fads and Fallacies" which proved most illuminating and entertaining. He made an exposé of current food fads, giving facts, names and figures. The beliefs and teachings of leading faddists were held up to scientific scrutiny with Dr. Fishbein's characteristic humor, much to the amusement of the audience.

At 1 p.m. on Saturday the group was entertained at a luncheon given at the Michael Reese Hospital. The afternoon meeting was held in the Sarah Morris Amphitheatre of Michael Reese Hospital, Mrs. Katherine Mitchell Thoma presiding. Dr. Chi Che Wang, of Nelson Morris Institute of Michael Reese Hospital, gave a brief report of five years' work on undernourished children. Both high and low protein diets of the same caloric value were given, with the result of more rapid gain in weight by those children on the high protein diet of 4 grams per kg. normal body weight.

Dr. M. Jampolis, of the pediatrics staff of Michael Reese Hospital gave a preliminary report of a study being made by him and his co-workers on the effect of ionized air on rachitic rats. Rats from the same litter were put on rachitogenic diets; some were put in cages to which ionized air, from which ozone and ultra violet rays had been excluded was conducted, and the others on the same diet were used as controls with no treatment. The rats under treatment did not develop rickets and had fairly normal growth, while those used as controls developed rickets and died. Rats which had already developed rickets were treated and showed marked improvement. The conclusion made was that ionization of indoor air is beneficial in the treatment of rickets. Dr. Hartman, physician and co-worker with Dr. Jampolis, then gave a careful explanation of ions and ionization. Mr. Blum, engineer working with Dr. Jampolis, described some of the principles of mechanical ventilation and said that if engineers were given an idea of the result required in ventilation, a mechanical device could be made to give that result in the most efficient manner.

Dr. M. G. Peterman, of the faculty of Marquette University and the staff of the Children's Hospital, Milwaukee, Wisconsin, spoke on "Treatment of Epilepsy in Childhood." He emphasized the fact that early treatment of idiopathic or essential epilepsy in children will bring about relief from attack or in time complete cure. It is a constitutional disease of the nervous system so that treatment requires a study of the individual and covers a period of weeks and months. Change of environment is beneficial and psychic factors are very important in the treatment. A regimen must be instituted of regular habits of eating, exercise, sleep, rest, evacuation. Fear of attacks must be banished, and the child made to think of himself as a normal individual. Strict ad-

herence to the regimen for a year or two is essential. The next step is regulation of diet. For the first few days a fasting diet is given, with acetone usually appearing on the fifth or sixth day. Then a ketogenic diet is given of protein, one gram per kilogram of body weight, carbohydrate, 15 grams, and fat to make up needed calories. This maintenance diet is continued for three to six months, with adjustments to meet individual reactions; then the protein is increased to ten grams, each alternate month, with addition of five grams of carbohydrate between. Dr. Peterman has had very good results from this treatment. The above meeting was reported by Alice M. Stewart, dietitian, Michael Reese Hospital, Chicago.

The Baltimore Dietetic Association has held its regular meetings on the first Monday of each month. The last meeting, held at the Union Memorial Hospital, was a very interesting one; Dr. Harry M. Stein, of the University of Maryland Hospital, lectured on his recent work on diabetes.

Janet Howland has accepted a position as assistant dietitian in the Quinby Inn Tea Room.

Elfreita Keubler, former dietitian of the Sinai Hospital, returned recently from a four months trip abroad. She is now the chief dietitian at the Franklin Square Hospital.

Anna Trentham of the Baltimore Gas and Electric Company is publishing some very attractive pamphlets on practical courses and demonstrations in experimental and home cookery.

The thirtieth meeting of the California Dietetic Association, Southern Section, was held in the Orange Tea Shop, November 5th, with twenty-five members and eighteen guests present.

An invitation was extended by the League of Nursing Education, and accepted by the dietetians, to present the program at the May meeting of the League.

Joseph A. Pollia, M.D., gave a most interesting discussion of the different types of constipation. He defined constipation as a lengthening of the normal interval of evacuation time.

Constipation was classified as follows:

1. Atony of the bowels—flabby muscles.
2. Obstructions or adhesions—neoplasms or new growth, cancers or tumors.
3. Hypertonicity of the bowels.

Ninety-nine per cent of constipation cases are due to this hypertonicity. With the development of the emotions in man came this type of constipation which is a reflexion of an increased nervous tension of the bowels. The tenth cranial, or vagus nerve, controls the rectum. The psychic centers control the vagus nerve which when disturbed may cause reactions in the intestines. Treatment to improve the physical condition is given by rest in bed, decrease of worry and the use of a diet free of irritants such as cellulose products, fatty acid producing foods and the more aromatic vegetables. Chronic spastic vagotonic cases necessitate a change in the bacteria of the intestinal tract. This is accomplished by an alternating diet; a diet free of foods of animal origin, except cream, butter and bacon, is given for four days, this is followed by a diet in which meat predominates. This alternating diet is given for fourteen days. Bacteria which have the property to grow in both an acid and an alkaline media are thus developed in the intestines.

At the December meeting, E. H. Risley, M.D., Dean of the Medical College at Loma Linda gave an interesting talk on diet in the treatment of hypertension and arterial diseases. The dietetic program recommended in hypertension by the speaker is the reduction of the total quantity of food intake, especially protein foods. One gram of protein per kilogram of body weight is sufficient for maintenance. One-half gram may be used temporarily. Salt is reduced to a minimum. Meat and other acid forming food are avoided. Dietetic treatment in functional heart disease consists of a very simple diet, both as to quantity and variety of food taken at one meal. The meals, however, may have variety. Food should be eaten slowly and never eaten in excess of body needs. Coffee, tea and alcoholic beverages, as well as coarse fermentable foods are omitted from the diet. Small amounts of fluids are taken with the meal. In the case of organic heart disease, compensated, the

ordinary diet with few restrictions is used. If the disease is uncompensated the condition is serious and the kidneys are usually involved. The Karrell diet may be necessary with additions as the patient improves.

Fluids should be carefully restricted in kidney disease if edema is present. Carbohydrates and fats are restricted in certain cases. The acidity of the urine should be kept low. In acute nephritis, food and drink must be limited. If the condition is markedly toxic, food should be withheld. The Karrell diet may be used and later increased. The salt content of the diet is kept low. A lacto-vegetarian diet with plenty of water and acid fruit beverages is given for chronic nephritis. The salt is kept low as in acute nephritis, if edema is present. Mosenthal's suggestion of 240 grams of sugar plus six lemons (giving 1000 calories) for six days for uremia was mentioned by the speaker.

The thirty-second meeting of the California State Dietetics Association, Southern Section, was held at the Orange Tea Shop, Monday evening, January 7, 1929.

Elizabeth Hayward of the California Fruit Growers' Exchange related some of the interesting features of her recent three months trip in the East among which were attendance at the National Convention of the American Dietetics Association and visits to numerous clinics. Helen Anderson of La Jolla gave additional reports of the convention.

Emma A. Gunther and L. Ray Balderston of Teachers College, Columbia University were the visiting speakers of the evening. Miss Gunther gave a very inspirational talk. "I will not talk on diets" she said, "but on something which will take you away from your work awhile." She charmingly related her experiences while visiting Spain and China. In the former country she had been one of the representatives to the International Congress of the Association of University Women. Women of many countries and many professions were there—and the outstanding characteristic of these leaders were the broadening interests each had outside of her work.

Miss Balderston spoke briefly and wittily of her "hobby" and her work—house-cleaning. She mentioned some interesting experiments being conducted in her department which she hoped would make cleaning a more efficient business.

Dr. Helen Thompson of the University of California at Los Angeles gave a concise report of Professor Windhau's research work with ergosterol which brought him the Nobel Chemistry prize of 1928. This is the first time that the prize has been given for research in chemistry of nutrition.

The above report was submitted by Rama V. Bennett of the Publicity Committee.

The New York Association of Dietitians held their November meeting at Pratt Institute, Brooklyn, with a very delightful dinner served in the new Tea Room. The meeting was called to order at 8 o'clock in the Memorial Hall with 50 members present. The President, Mary Northrup, introduced the speakers. Miss Goldsmith spoke on "Problems in Case Work and Dietitians Going into the Home;" Mildred Boley discussed "Some of the Ways of Treating Chronic Patients and How the Work Differs from the Feeding of Regular Patients in Hospitals;" Mrs. Anschutz of Bloomingdale talked on "Diet Problems in Mental Cases;" Miss Helburn of Lebanon Jewish Hospital talked on "The Problem of Serving of Kosher Food;" Elva George discussed "Problems of the Department of Welfare Not Only Regarding Food but the Care and Equipping of the Catering Departments." Before closing the meeting Miss Northrup asked for a vote of thanks to Miss Holloway and to Pratt Institute for entertaining the Association again this year.

Miss Hickcox, who has been Head Dietitian at the Fifth Avenue Hospital, New York City, for several years, is now Mrs. Klosterman. Her place has been taken by Angeline Phillips, who was one of Miss Hickcox's assistants.

The February meeting was held at the Russell Sage Foundation. Dr. H. Louise Campbell of Columbia University spoke on "The Relation of Diet to Health and Vitality." This was followed by a discussion of

the practical application of the problem; Application to Hospitals, Elva George and Mary W. Northrup; Application to Field of Education, Dr. Mary Rose and Dr. Grace MacLeod; Application to Public Health, Bertha Edwards. Members of the Home Economics Association were guests at the meeting.

Southeastern Michigan Dietetic Association. Dr. Dennis Kovan gave an interesting talk on, "Infant and Child Feeding from the Medical Viewpoint" at the December meeting of the Southeastern Michigan Dietetic Association which was held at the Hotel Statler in Detroit.

The engagement of Esther Beach to Dr. Maurice McGarvey of Dearborn, Michigan has been announced. Miss Beach has been administrative dietitian at the University Hospital in Ann Arbor for the past two and a half years.

The January meeting of the Southeastern Michigan Dietetic Association was held at the Highland Park Hospital in Highland Park. Dr. Perry Severn of the architectural firm of Berlin and Severn, Chicago, spoke on "Flod Service in the Bacon Plan Hospital." Dr. Willard Quennell of Highland Park Hospital, discussed this talk.

Dorothy Knight Hassler has moved from Detroit to Indianapolis.

Mary Margaret Richert, a former student at the University Hospital in Ann Arbor, has accepted a position at the Harper Hospital of Detroit.

Ruby Gramling is assistant to Esther Siefert in the dietary department at Presbyterian Hospital, Pittsburg.

Edna Klumb has resigned her position as teaching dietitian at the University of Michigan Hospital and has accepted a position on the staff at St. Mary's Hospital in Rochester, Minnesota.

Waida Gerhardt who recently completed her student dietitian training at the University Hospital in Ann Arbor, has taken a position in the Research Kitchen, Presbyterian Hospital, New York City.

Frances Rose of Iowa City, formerly dietitian at the Des Moines Methodist Hospital in Des Moines, Iowa, has accepted a position as dietitian at the Harper Hospital in Detroit.

St. Louis Dietetic Association. Minnie Sprain, former student at Barnes Hospital, has accepted a position at the Gorgas Hospital, Birmingham, Ala.

Eugenia Martin, chief dietitian at the Barnes Hospital, St. Louis, has increased her staff of assistants by the addition of Irma Hunt, one of her former students.

Mrs. Jane Enlow Leach, has re-entered the field of nutrition to conduct a series of experiments in cookery for the Pet Milk Company. Mrs. Leach is a former Barnes Hospital student.

Amalia Lautz, graduate nutrition student at the University of Chicago spent part of her holiday vacation as the guest of Mrs. Marjorie Hulsizer Copher.

Isabel Currie of the Missouri Baptist Hospital, attended the Midwest Dietetic Association Meeting in Chicago, recently.

The new Jewish Hospital of St. Louis has recently begun another extensive building program. The Nurse's home is rapidly nearing completion; a new Out-patient Clinic has been started. On January 10th, $150,000 was given for the establishment of a convalescent hospital. All of these new additions are in the immediate vicinity and will be of the same type of architecture as the main hospital, making a very impressive group of buildings.

Minnesota Association of Hospital Dietitians. Winnifred Howard of the Ancker Hospital, St. Paul, Minn., is now Mrs. H. Erickson. Her marriage took place October 15, 1928.

Clara Fehning has accepted the position of Assistant Dietitian at Midway Hospital, St. Paul, Minn.

Margaret Patterson has returned as Head Dietitian at St. Andrews Hospital, Minneapolis, Minn.

Adelaide Jury was transferred to the Fort Snelling Veterans' Hospital from Mount Alto, Washington, D. C. She reported for duty September 16, 1928.

Gertrude Ekman is the dietitian at the Children's Hospital, St. Paul, Minn.

Louise Marty resigned as dietitian from the new Asbury Hospital, Minneapolis, Minn. in September. She has accepted a position with Witt's Market House, Minneapolis. Early this fall, Miss Marty was married. Her name is now Mrs. R. L. Boies.

Eleanor Newcomb took Miss Marty's place at the New Asbury Hospital, Minneapolis.

Grace Morland of the Northern Pacific Hospital and Eva Gregorson of Miller Hospital, St. Paul, attended the Convention in Washington, D. C.

Mary Murphy resigned at the Glen Lake Sanitarium, Oak Terrace, Minn., and has accepted a position at the Pleasant Valley Sanitarium, Patterson, New Jersey. Dora Kab replaced Miss Murphy, December 1, 1928.

The Swedish Hospital in Minneapolis has two new dietitians, Doris Rhinestrom is in charge of the department and Ethel Clemens is her assistant.

The officers of the Minnesota Dietetic Association for the year 1928–1929 are as follows: President, Lillian Lundquist, Eitel Hospital, Minneapolis; Vice President, Eva Gregorson, Miller Hospital, St. Paul; Recording Secretary, Eleanor Newcomb, Asbury Hospital, Minneapolis; Treasurer, Helen Kuntz, Northwestern Hospital, Minneapolis; Corresponding Secretary, Harriett Warmington, U. S. Veterans' Hospital No. 106, Fort Snelling, Minn.

The following are reports of meetings for November, December, 1928, and January, 1929:

The Association met November 5 at the Nicollet Hotel, Minneapolis. The Winston-Newell Wholesale Grocers were in charge of the program which follows:

3:00 p.m.—Business Meeting.

3:15 p.m.—Discussion of the kinds and qualities of canned goods. Salesmen from the following companies were among the speakers: California Packing Corporation, Hawaiian Pineapple Company, Minnesota Pea and Corn Packers Association.

5:00 p.m.—Tea was served.

The Association met Monday, December 3, at 1:30 p.m. at Witt's Market House, Minneapolis, Minn.

Gudrun Carlson, who is associated with the American Meat Packers, gave a demonstration on methods of retaining juices in meat, the use of acids in beef cookery, larding lean cuts of beef, salting, dredging and searing of beef. At 3:00 o'clock, Lois Kellogg, Witt's Home Demonstrator, demonstrated beef cuts. Recipes were given for large quantity cooking. Dinner followed at the Business Womens Club.

The Association met January 14, at Millard Hall, University of Minnesota, Minneapolis; the following program was given:

3:00 p.m.—Business Meeting.

1. Committee chairmen reports.
2. Magazine reports.

4:00 p.m.—Round table discussion—New Special Diets.

The Massachusetts Dietetic Association planned the following program for 1928 and 1929: October 11, "Employment Management," Dr. Sidney M. Bunker, McLean Hospital, Waverley; November 9, Reports of A. D. A. Convention, "The Banana, Its Place in the Diet" Dr. Wallace Leonard; December 14, "Food Costs," Mr. Lee N. Chalmers, Hotal Brunswick; January 11, "Epilepsy," Dr. W. G. Lennox, Boston City Hospital; February 15, "Food Characteristics; Near East, Slavic, Far East, Nordic"; March 8, "Control of Bacterial Flora by Diet," Dr. H. L. Higgins, Massachusetts General Hospital; April 12, "Diet in Poliomyelitis," Dr. Frederick DeLue; May 10, Annual Business Meeting. The following are the present executive officers of the Association: Margaret McGovern, President, Boston City Hospital, Boston; Rosina Vance, Vice-President, Massachusetts General Hospital, Boston; Alice Van Dyke, Recording Secretary, Cambridge Hospital, Cambridge; M. Louise Eliott, Corresponding Secretary, The Neighborhood Kitchen, Boston; Hilda French, Treasurer, New England Deaconess Hospital, Brookline; Evelyn Pearson, Parliamentarian, Bradford Academy, Bradford.

Dorothy Satterlee has been appointed assistant dietitian at the Boston City Hospital.

Alice Friege has succeeded Helen Brown, dietitian at the New England Hospital for Women and Children. Miss Brown is at home for the present in Woonsocket, R. I.

Announcement has been made of the marriage of Elizabeth Bellmyer, until recently assistant dietitian at the Peter Bent Brigham Hospital, to Mr. Stanley Wilson Colburn.

Margery Webster has left the Children's Hospital to become dietitian of the Framingham Hospital.

Beatrice Clark, a Peter Bent Brigham Hospital student is the new assistant at the Deaconess Hospital.

Thirga Northrup is the new dietitian at the Beverly Hospital.

Mr. Lee N. Chalmers of the Hotel Brunswick spoke on "Food Costs" at the December meeting of the Association.

The General Baking Company entertained the Massachusetts Association on January 18th with a trip through their plant. This proved most interesting for the process of making bread was followed from the beginning to the producing of the finished product.

The Philadelphia Dietitians Association, with a membership of approximately one hundred and seventy-five plus twenty new members who have been taken in since Fall, is in the midst of one of its most successful years. The program for 1928–29 was published in booklet form, announcing the nine monthly meetings and two special observation trips. The programs have been arranged to include a wide range of subjects of interest to all of the members.

In November Dr. Henrietta Calvin, Director of Home Economics, Board of Public Education, Philadelphia, spoke, as well as Miss Emma Smedley, Director of School Lunches for the City, and Miss Ruth P. Sill, Principal of the Philadelphia Trade and Continuation School. The members were shown through this building and learned something of the work accomplished. The speaker's subjects were: "The School," "The Home Economics Laboratory," and "The School Cafeteria."

The December meeting, held at the Jefferson Hospital, discussed dietetics as related to diseases of the circulatory system. Dr. Wm. D. Stroud, Chief of the Heart Clinic, Pennsylvania Hospital, was the principal speaker

"Post Graduate Training for Student Dietitians" was the subject of the January meeting, Mary Northrup, Chief Dietitian, Montefiore Hospital, New York City, was the speaker.

Some of the subjects and speakers scheduled for the future are as follows:

February Meeting: "Food Purchases" discussed by Mr. Chambers purchasing agent for the Benjamin Franklin Hotel, followed by a round-table discussion in charge of Mr. John M. Smith, Director of Hahnemann Hospital. Food cost and methods of calculation for the school lunch, for the college lunch, for the restaurant and for the hospital, will be discussed by Miss Smedley, Director of Philadelphia School Lunches, Miss Anne C. Brierly, Swarthmore College, Mr. Fritz Pflug, manager of the Arcadia Cafe, and Mr. Hatfield, Assistant Superintendent of the Pennsylvania Hospital. The Hospital Association of Philadelphia has been invited to the February meeting as guests of the Dietitians' Association.

March Meeting: We feel that we have been particularly fortunate in securing Dr. Mary Swartz Rose, Ph.D., Professor of Nutrition, Teachers College, Columbia University, to discuss "Food Values as We Know Them Today", at our meeting March 12th, at 8,00 P.M., Drexel Institute. The Association is inviting the Philadelphia Home Economics Association and the student clubs of Drexel and Temple University as guests for this meeting. They would like to extend an invitation to any members of dietitians' associations in other cities who may find it possible to come.

April Meeting: A social supper conference in charge of the hospitality committee will be held at the College Club, to be followed by the Annual Meeting. Annual reports and the report of the nominating committee will be heard and the election of officers will be held at this time. Some special features of entertainment and music are also promised for this meeting.

May Meeting: Dr. Edward A. Strecher, Professor of Nervous and Mental Diseases, Jefferson Medical College, will discuss "Personal Mental Hygiene," at the Friends Select School.

June Meeting: The last meeting of the year will be held on June 11th at the Philadelphia Cricket Club. The meeting will be in charge of the hospitality committee.

In the Fall several groups visited one of the candy factories in the city, by special appointment. In the Spring groups will be taken on an observation visit through one of Philadelphia's largest ice cream plants.

Among those taking trips abroad the past year were Mildred Liebermann and Gertrude Peabody.

Laura Drummond of Temple University, had a most interesting trip to South America.

Laura I. Henshaw, Dietitian, Germantown Hospital, was married in October to Dr. Ira Towsan of Germantown.

Elizabeth Miller who has been ill, is rapidly improving and soon hopes to return to her work at the Philadelphia General Hospital.

Frances Hoag was injured in an automobile accident while en route from Des Moines to Minneapolis.

Mary M. Forman, formerly dietitian at the West Philadelphia Homeopathic Hospital, has taken a position as nutritionist with the Philadelphia Inter-State Dairy Council.

Mary E. Kennedy has left the Philadelphia General Hospital to take a position in New York City at the New York Orthopedic Hospital.

Nora Yost, owner and manager of the Yellow Lantern, has employed a new dietitian, Lilah Gautk, who took her work at the Universities of Tennessee and Chicago.

Many of the members of the Philadelphia Association attended the meetings of the American Dietetic Association in Washington, the American Home Economics Association in Des Moines and the National Education Association in Minneapolis, recently.

British Columbia Dietetic Association. The regular monthly meetings were resumed in September. The first was a business meeting held at the Willow Tea Rooms, Miss A. McMaster as hostess.

In October a social evening was given in honour of Marjorie Fraser who was recently married to Mr Cyril Longster. Miss Fraser has been an Assistant Dietitian at the Vancouver General Hospital for the past two years.

The Quarterly Dinner Meeting was arranged for November in conjunction with the Vancouver Business and Professional Women's Club. The distinguished guests and speakers of the occasion were the Lord Mayor and Lady Mayoress of Stratford-on-Avon, also a leader of the Shakesperean Players from that city.

In December the members of the Association met at the General Hospital, as guests of Ethel Pipes, Chief Dietitian, and her assistants. The subject for discussion was "Truths Regarding Dietetic Fads and Fancies," papers were given by Miss D. Bussell; Miss B. Lawson; Miss I. Miller and Miss D. Young. Following these, Miss Pipes, President of our Association, gave an interesting résumé of the Western Dietitians' convention, which she attended in Seattle.

Christmas donations were given at the December meeting toward our annual fund for helping those in need of both dietetic and financial assistance.

Ontario Dietetic Association.. Helen Robertson, formerly Assistant Dietitian at the Sick Children's Hospital, Toronto, has accepted the position as dietitian in the General Hospital at Moosejaw, Saskatchewan.

Elizabeth Fair has resigned her position at the Regina General Hospital and is now at her home in Kingston, Ontario.

American Red Cross Nutrition Service. The School of Home Economics, University of Tennessee, under the direction of Jessie D. Harris, has perfected arrangements for offering a Nutrition Methods Course in the summer session. The Knox County Chapter offered the services of Mrs. Wagner, a Red Cross nutritionist. The Curriculum Committee of the University and the Dean of the Summer Session have accepted this offer and have approved the following courses:

581. Methods in the Conduct of a School Nutrition Program. Graduate. Prerequisite or parallel graduate work in Nutrition. Six hours. Three hours credit. Mrs. Grace Wagner.

582–3. Supervised Field Practice. Field work in conducting a county nutrition program. . . . . This course involves responsibility for the nutrition program in rural schools of Knox County with conferences and discussions. It will be conducted by the Know County Nutrition Supervisor. Twelve periods. Three hours credit.

This means that students will take one hour lecture each week day in methods, and will have the rest of the day free for school work, so they could be in the schools all day long. For the first six weeks Dr. Martha Koehne will lecture and for the last six weeks, Dr. J. Winders of the University of Texas. This is in addition to the Methods and Field Work course which Mrs. Wagner will give.

The New York *Times* for January 14, 1929, gave front page space to the following news item concerning a prominent member of the American Dietetic Association. "Miss Gudrun Carlson, of Minneapolis, was appointed today Trade Commissioner at Oslo, according to an announcement by the Department of Commerce. She has been director of the Home Economics Department of the American Institute of Meat Packers for six years.

"Two women who earlier invaded this sphere of public life are Miss Viola Smith of Stockton and Miss Elizabeth Hawes of Memphis, with headquarters at Shanghai and Rome, respectively.

"Miss Carlson is a graduate of the University of Minnesota and Columbia University."

Marie Horst who has been at Danbury Hospital, Connecticut, for some time left shortly after Christmas and is now visiting with her sister in New Haven. Helen O'Donnell formerly of St. Frances Hospital, Hartford, has taken her place.

Winifred Teachout, assistant Dietitian at the Bridgeport Hospital, spent Christmas at her home in Montpelier, Vermont.

It is with considerable satisfaction that the editor calls attention to a news item which appeared in the Scranton (Pennsylvania) *Republican* for November 19, 1928. "A most delightful tea was given on Saturday afternoon by the Nurses Alumnae association of the Moses Taylor hospital, in the nurses' home, honoring Miss Mary E. Huhn, who has been dietitian of the hospital for twenty-five years. Miss Huhn was sssisted in receiving the guests by Miss Ann K. Ward, president of the association. Tea was served in the sun-room, with Miss Janet Grant and Mrs. John Mann pouring. A profusion of fall flowers decorated the rooms. Over seventy-five guests called during the receiving hours. Miss Huhn was presented with a bracelet from the association members."

Miss Huhn also received flowers, presents and good wishes from the hospital staff doctors and others connected with the hospital. She has been associated with the same Superintendent and Surgeon-in-Chief during her twenty-five years of activity. Her record unquestionably indicates her ability and commendable disposition. It reacts favorably as well on the Moses Taylor Hospital administration as a whole. Her permanence very properly refutes the impression one sometimes receives that *all* dietitians flit as do the migratory birds with the changing seasons.

CURRENT LIST OF HOSPITALS GIVING APPROVED COURSE TO STUDENT DIETITIANS

The list of hospitals giving approved courses to student dietitians is constantly enlarging; we plan to publish regularly a complete list, thus enabling our members and friends to follow our advances in this line. The Committee on Approval is working upon a plan whereby personal inspection of such courses may be made feasible. Such inspection should promote unbiased uniformity in determining whether or not courses should be approved We are again sending out a form letter to the previously accepted hospitals so that we may follow courses as given from year to year. If changes in supervision or plans of such courses are made, we ask that the Chairman of this Section be notified. Incoming dietitians will be requested to re-register the course with the Committee.

There are now several questionnaires in the hands of the committee for approval; if accepted, they will be published in the June JOURNAL.

The Committee serving this year are: Eugenia Martin, Barnes Hospital, St. Louis, and Rosina Vance, Massachusetts General Hospital, Boston, Mass.

List of Approved Hospitals, American Dietetic Association

Hospital	*City*	*Dietitian*
British Columbia:		
Vancouver General Hospital	Vancouver	Ethel Pipes
California:		
California Lutheran	Los Angeles	Reeva Hinyan
Hospital of Good Samaritan	Los Angeles	Hester Wieman
Methodist Hospital	Los Angeles	Leone Hall
Scripps Metabolic Clinic	La Jolla	Helen Anderson
Fabiola Hospital Association	Oakland	F. B. Hagerty
Highland Hospital	Oakland	Mrs. L. E. Cummings
San Francisco Hospital	San Francisco	Helen A. Douglas
Stanford University and Medical Schools	San Francisco	Charlotte Sloan
Colorado:		
St. Luke's Hospital	Denver	Thelma Franke
Connecticut:		
Bridgeport General Hospital	Bridgeport	Leslie Hunter

Hospital	*City*	*Dietitian*
Illinois:		
Cook County	Chicago	Millie Kalsem
Evanston	Evanston	Sarah E. Osborn
Michael Reese	Chicago	Mrs. K. Mitchell Thoma
Mt. Sinai	Chicago	Florence Nolan
Presbyterian	Chicago	Elizabeth Hennecke
St. Luke's	Chicago	Mary Sorenson
Indiana:		
City Hospital	Indianapolis	Amy Colescott
Indiana University	Indianapolis	Lute Trout
Methodist Hospital	Indianapolis	Mrs. Margaret Marlowe
Iowa:		
Iowa Methodist	Des Moines	Frances Rose
University of Iowa	Iowa City	Kate Daum
Maryland:		
Johns Hopkins	Baltimore	Phyllis D. Rowe
Massachusetts:		
Children's Hospital	Boston	Martha Stuart
Massachusetts General	Boston	Rosina Vance
Peter Bent Brigham	Boston	Thelma Tubbs
Michigan:		
University Hospital	Ann Arbor	S. Margaret Gillam
Minnesota:		
Ancker Hospital	St. Paul	Winifred Howard
Charles T. Miller	St. Paul	Eva Gregorson
Minneapolis General	Minneapolis	Lois Hurlbutt
University Hospital	Minneapolis	Gertrude Thomas
Missouri:		
Barnes Hospital	St. Louis	Eugenia Martin
Kansas City General	Kansas City	Merle Buckles
Research Hospital	Kansas City	M. Ethel Ollis
Nebraska:		
Lincoln General	Lincoln	Leta B. Linch
New York:		
Albany Hospital	Albany	Virginia Howard Ray
Buffalo City Hospital	Buffalo	Ursula Senn
Clifton Springs Sanitarium	Clifton Springs	Helen Clarke
Lebanon Hospital	New York City	Betsy Helburn
Montefiore Hospital	New York City	Mary Northrop
Presbyterian Hospital	New York City	Martha Koehne
Rochester General	Rochester	Effie Winger
Strong Memorial	Rochester	Grace Carden
Fifth Avenue Hospital	New York City	Sarah Heckox
North Carolina:		
Watts Hospital	West Durham	Mary Ellis
Ohio:		
Miami Valley Hospital	Dayton	L. Atta Bolender
Mt. Sinai Hospital	Cleveland	Helen Mallory
University Hospital	Columbus	Wilda Hockenberry
Oklahoma:		
State University of Oklahoma	Oklahoma City	Edith Tilton

Hospital	*City*	*Dietitian*
Pennsylvania:		
Homeopathic Hospital	Pittsburgh	Irene Willson
Western Pennsylvania Hospital	Pittsburgh	Charlotte Addison
South Carolina:		
South Carolina Hospital	Columbia	Lelia Maude Pace
Greenville City	Greenville	Grace Ames
Utah:		
Latter Day Saints Hospital	Salt Lake City	Katherine Bielby
St. Mark's Hospital	Salt Lake City	Elizabeth Steelman
Washington, D. C.:		
Walter Reed General	Washington, D. C.	Grace H. Hunter
Washington:		
Interne Dietitian Training under auspices of the Washington Branch of the American Dietetic Association. Training arranged through affiliation at the following hospitals:		
Tacoma General Hospital	Tacoma	Flora McLaughlin
Children's Orthopedic	Seattle	Dorothy Goodrich
Seattle General	Seattle	Mabel G. Flanley
Northern Pacific Beneficial Association affiliated with Tacoma General Hospital	Tacoma	Gertrude Stevens

THE PERMANENT EDUCATION EXHIBIT OF THE AMERICAN DIETETIC ASSOCIATION

Heretofore an education exhibit has been prepared for each National Convention of the American Dietetic Association and then discarded. This year the committee has decided to arrange all the illustrative material in folders, to be placed in filing cabinets in readily accessible form, catalogued and maintained as a permanent exhibit available at all times.

We have no duplicates and therefore it is very necessary that those interested return the borrowed material promptly. We want members to profit by this very useful material. In order to convey just what the exhibit contains and how it may be obtained, the following sample order and outline of contents is submitted. Due to the necessary expense of maintaining this exhibit, it will be available only to paid-up members of the Association. Please be sure to give *correct call number* and *title* of literature wanted. This loaning policy is an experiment; please help us to make it a success by returning material in *two weeks*.

SAMPLE ORDER

To The American Dietetic Association
25 E. Washington St.,
Chicago, Ill.

Please send the following:

B4 Barnes and Maternity Hospital. St. Louis, Mo.
Dietetics for Student Nurses.
Diets, Special.

M14 Michigan State College, East Lansing, Mich.
Home Economics and Nursing Course Combined.

These will be returned after *two weeks*.

Yours very truly,

CONTENTS—PERMANENT EDUCATION EXHIBIT

Call Number		*Call Number*	
A1	*Institute of American Meat Packers, Chicago, Ill.*		Use of Meat. Bulletin No. I
	Liver—Nutritive Value and Ways of Serving		Use of Meat. Bulletin No. II
	Meat Diet in Health and Disease	A2	*Auburn City Hospital, Auburn, N. Y.*
			Diets, Special

Call Number	
A3	*American Red Cross, Washington, D. C.*
	Food Why? What? How?
	Nutrition Service
	Organization of a Nutrition Service
B1	*Robert Brigham Hospital, Boston, Mass.*
	Diets, Special
	Menus
B2	*Baltimore Dairy Council, Baltimore, Md.*
	Nutrition Material for Children
B3	*Baylor University Hospital, Dallas, Texas*
	Forms, Hospital
B4	*Barnes and Maternity Hospital, St. Louis, Mo.*
	Dietetics for Nurses
	Diet therapy
	Diets, Special
	Menus
	Forms, Hospital
B5	*Bellevue and Allied Hospitals, New York City.*
	Cost Accounting
	Dietetics for Nurses
	Diets, Special
	Miscellaneous Forms
	Requisition Blanks
	Student Dietitian's Course
B6	*Boston City Hospital, Boston, Mass.*
	Dietetics for Student Nurses
	Dietetics for Medical Students (Practical Course)
	Diet therapy for Student Nurses
	Diets, Special
	Forms, Hospital
	Student Dietitian's Course
B7	*Battle Creek Sanitarium, Battle Creek, Mich.*
	Dietetics for Student Nurses
	Diets for Home Use
	Diets for Uncomplicated Cases
	Menus Used for Surgical Cases
B8	*Battle Creek Sanitarium—Nutrition Research Laboratory*
	Iron, inorganic, in relation to nutritional anemia
	Iron from various sources in relation to nutritional anemia
	Animal experiments conducted at Nutrition Laboratory
	Carbohydrates (five), comparative physiological values based on growth and fecal analysis
	Lactose, comparative physiological values based on growth and fecal analysis
B9	*Boston Dispensary, Boston, Mass.*
	Diabetic Patients, foreign birth, use of national foods
	Diet therapy in Out Patient Department
	Food Clinic
B10	*Bibliographies*
	Hypertension
	Nephritis
	Books and Pamphlets on Diet and Disease
C1	*Community Health Association, Boston, Mass.*
	Budgets
	Pregnancy
	Prenatal Care—Nutrition Talks
	Social Service Dietetics
C2	*Clifton Springs Sanitarium and Clinic, Clifton Springs, N. Y.*
	Diets
	Menus, Selective—Dining Room and Tray Service
	Menus, Special Diet
	Nutrition for Student Nurses—Laboratory Work
C3	*California Lutheran Hospital, Los Angeles, Calif.*
	Diets, Special
C4	*Civic Hospital, Ottawa, Ontario, Canada.*
	Diabetic Diets
	Dietetics for Student Nurses
	Diets, Special
	Formula Room Recipes
	Liver Recipes
	Menus
	Requisition Blanks
C5	*Children's Hospital, Boston, Mass.*
	Dietetics for Student Nurses

Call Number

Diets
Menus

C6 *Cook County Hospital, Chicago, Ill.*
Dietetics for Student Nurses
Diets
Forms used in Dietary Department
Forms used in Dietary Department of Nurse's Residence
Forms used in Metabolic Division
Formula Order Blanks
Student Dietitian's Course

C7 *Columbus Hospital, Chicago, Ill.*
Nephritic Diets
Reducing Diets

C8 *Columbia University, New York City.*
Dietary Case Studies, Helen Jackson Hubbell
Journal of American Dietetic Association—Reprints

D1 *Clinic*
The Food Clinic as a Center for Teaching and Training Students—Frances Stern and Jean Reyner
Boston's Surveys. 1925 and 1926. Gertrude Spitz
Nutrition in a Health Program. Bertha Edwards
The Rôle of Nutrition in Health Education. Clair Turner
The Dietitian and the Out-Patient. Arthur E. Strauss

D2 *Education*
Current List of Hospitals giving the Approved Course for Student Dietitians
Student Dietitian's Course (Standard)
A Checking Scheme for Recording Special Abilities and Qualifications for Student Dietitians, A. Lautz
College Education and the Food Specialist, Agnes Fay Morgan
The Adjustment of the College Graduate to Hospital Work in Nutrition, Amalia Lautz

Call Number

An Accredited Course for Student Dietitians, Eva Thallman

D3 *Administration*
A Nutritive Analysis of Hospital Food Bills, Ruth Wheeler and Edna Shalla
The Place of the Dietetic Department in the Hospital from the Administrator's Viewpoint, E. S. Gilmore
Budgeting the Dietary Department and Purchasing Food Supplies, Lucius R. Wilson
Scientific Buying and Meal Planning, Quindara Oliver
The Department Budget—Report of the Administration Section, American Dietetic Association
Dietary Department Budget and Equipment, Mary Reed
A Food Distribution Ledger Sheet, E. A. George
The Hospital Dietary Department, S. Margaret Gillam
The Hospital Dietary Department—A Forecast, Malcolm MacEachern
An Economic Analysis of Hospital Food Bills, Ruth Wheeler and Vivian Moe
Equipment for a Hospital Kitchen, Ruth M. Cooley
The Operating of a Hotel Food Department, A. Shircliffe
Equipment for Institution Food Departments, O. Webber
Marketing and Menu Planning, M. Faith McCauley
Residence Hall Job Analysis, Elizabeth Bemis
Fundamental Buying Principles as Applied to Perishable Foods, Frederick Snyder
The Psychology of Personnel Management, Edgar Swift

D4 *Nursing*
Report of Sub-Committee on Teaching Dietetics to Student Nurses, Katherine Fisher

Call Number	
	Bedside Teaching of Student Nurses, Helen Hubbell
	The Examination of Student Nurses in Dietetics, Sister M. Domitilla
	A View of the Hospital Dietitian from the Nursing Standpoint, Elizabeth Greener
	A Nutrition Worker in the Hospital, Helen Hubbell
D5	*Miscellaneous*
	The Simplicity of Infant Feeding, McKim Marriott
	Breast Milk—A Variable Food, Icie Macy and Julia Outhouse
	A Comparative Study of Italian, Polish, and Negro Dietaries, Gertrude Gates Mudge
	Teaching Food Selection to Patients, Florence H. Smith
	Changes in the German Diet, R. R. Kuczynski
	Food Fads, Mary Pascoe Huddleson
	Civil Service and the Dietitian, B. Andrews and Alice Leet
	A Chapter in the History of Dietetics, Martha Byerly
	Practical Problems in Dietetics for the Medical Student, Margaret McGovern
	Nutrition Round Table of the Massachusetts Dietetic Association, Jean Reyner
D6	*Medical*
	Recent Developments in Vitamin Structure, W. G. Eddy
	The Dietetic Factor in Post-Operative Treatment, Llewellyn Sale
	Metabolism of Carbohydrate in Relation to Ketosis, Dr. Phillip A. Shaffer
	Emotions and Digestive Functions, George W. Henry
	Studies of Inorganic Salt Metaboiism, W. Bauer and Joseph Aub

Call Number	
D7	*Diabetes*
	Diabetic Diets for Children, Julian Boyd and Martha Nelson
	The Education of the Ambulatory Diabetic, W. H. Olmstead
	The Diabetic Diet, Elliott P. Joslin
	Food Requirements in Children with Diabetes Mellitus, W. L. Ladd
	A Report of a Case of Diabetes with Complications, Fairfax Proudfit
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